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JOURNAL

OF THE

AMERICAN VETERINARY MEDICAL ASSOCIATION



Convention Number

84th Annual Meeting Cincinnati, August 18-21, 1947

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Volume CXI

JULY 1947

Number 844



SELLING VETERINARY MEDICINE SHORT

A Blameworthy **Experiment**
Transgression
Speculation on Human Well-Being

Planning, effort, demand, prices, favorable weather inscribed seven "fat" years on the records of livestock farming and wrote brilliant reports into the history of veterinary medicine in the face of emergency.

Regretfully, by the same tokens, there developed despicable movements to sell out the clinical branch of veterinary medicine despite the moral, economic, and scientific factors sacrificed.

SELLING VETERINARY SCIENCE SHORT
MAY EVOLVE INTO A MAJOR ISSUE
FOR THE ORGANIZATIONS OF THE
VETERINARY PROFESSION AND THE
LIVESTOCK INDUSTRY TO GIVE
THOUGHTFUL CONSID-
ERATION.



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LABORATORIES, OMAHA, NEBR.



SERUM PLANT, RALSTON, NEBR.



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"THE VIKING SHIP"

During the AVMA Convention
August 18-21

Journal of the American Veterinary Medical Association

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VOL. CXI

JULY, 1947

NO. 844

The Cincinnati Session—A Message from President Simms

IN 1884, the American Veterinary Medical Association, having reached the mature age of 21 years, ventured across the mountains and held its first meeting west of the Atlantic Seaboard. The host city was Cincinnati. Now, after sixty-three years, we are to have the privilege of enjoying again the hospitality of the Queen City.

In this we are very fortunate. Cincinnati is located within a night's ride by train or day's drive by auto of practically half the veterinarians of the United States; it is close to the heavily populated sections of Canada; and our members and friends south of the border will find it as conveniently located as any convention city of the last dozen years. It is easily reached from all directions by good highways, trunk-line railroads, and up-to-the-minute airlines. Its hotels are quite adequate in quantity and high in quality.

With its beautiful setting, its historical background, its fine residential districts, and its rich musical lore, Cincinnati offers wonderful possibilities for recreation and entertainment. The local committee is expecting to take full advantage of these in providing the entertainment which we have learned to consider a part of every annual meeting.

The hardworking program committee, realizing the worldwide demand for food of animal origin and the responsibility of our profession in the production of these foods, is emphasizing diseases of food-producing animals in arranging the program; but they are not neglecting the other fields of veterinary medicine. They promise us a combination of practical and scientific information which will bring us up-to-date in all the fields of veterinary endeavor. They assure us that the papers, discussions, demonstrations, and exhibits

will be second to none in the history of the AVMA.

If we are to render the fine professional services which the public expects of us, we



President B. T. Simms

must keep acquainted with the new developments in the art and science of treating, controlling, and preventing animal diseases. The leaders of our profession have long accepted this fact and have realized that attendance at meetings and conferences is a necessity in keeping abreast of the times. The Cincinnati meeting is a "must" for the veterinarians of North America.

s/B. T. SIMMS, *President.*

THE CINCINNATI SESSION

Executive and Legislative Sessions

Board of Governors.—Saturday, August 16, 10:00 a.m.

Executive Board.—Sunday, August 17, 9:00 a.m. and 2:00 p.m. Also 7:30 p.m., if necessary.

House of Representatives.—First session, Monday morning, August 18, 9:00 o'clock. Second session, Monday evening, August 18, 7:00



President-Elect W. A. Hagan

o'clock. If a third session is required, it will probably be held on Tuesday evening, August 19, at 7:00 o'clock.

Election and Installation of Officers.—Nominations for the elective officers of the association will take place at the end of the Opening Session on Monday afternoon, August 18. If a ballot election is required on account of more than one nomination for the respective offices, polls will be set up in the AVMA executive secretary's office (Parlor J of the Netherland Plaza) on Tuesday, August 19.

The officers to be elected at Cincinnati are: president-elect, five vice-presidents, and treasurer.

President-Elect W. A. Hagan will be installed as President at the final General Session on Thursday morning, August 21, along with other officers elected at this annual meeting.

Officers of the American Veterinary Medical Association

1946-1947

President—B. T. SIMMS, Washington, D. C.

President-Elect—W. A. HAGAN, Ithaca, N. Y.

First Vice-President—RONALD GWATKIN, Ottawa, Ont.

Second Vice-President—RALPH L. WEST, St. Paul, Minn.

Third Vice-President—JOHN H. GILLMAN, Memphis, Tenn.

Fourth Vice-President—C. R. CURTIS, Portage, Wis.

Fifth Vice-President—E. L. STUBBS, Philadelphia, Pa.

Executive Secretary—J. G. HARDENBERGH, Chicago, Ill.

Assistant Executive Secretary—R. C. KLUSSENDORF, Chicago, Ill.

Treasurer—J. V. LACROIX, Evanston, Ill.

Executive Board

Chairman, and Member-at-large — C. C. HASTINGS, Williamsville, Ill.

District I—A. E. CAMERON, Ottawa, Ont. (1947)

District II—S. F. SCHEIDY, Drexel Hill, Pa. (1948)

District III—J. L. AXBY, Indianapolis, Ind. (1948)

District IV—B. E. CARLISLE, Camilla, Ga. (1949)

District V—C. C. FRANKS, Des Moines, Iowa (1950)

District VI—N. J. MILLER, Eaton, Colo. (1951)

District VII—E. E. WEGNER, Pullman, Wash. (1950)

District VIII—W. G. BROCK, Dallas, Texas (1951)

District IX—C. P. ZEPP, New York, N. Y. (1947)

District X—WALTER R. KRILL, Columbus, Ohio (1949)

Board of Governors, *ex officio*—C. C. HASTINGS, Chairman; B. T. SIMMS, W. A. HAGAN.

The 1947 Session

The eighty-fourth annual meeting of the American Veterinary Medical Association will be held at the Netherland Plaza, Cincinnati, Ohio, Aug. 18-21, 1947. There will be an executive session of the Board of Governors on Saturday, August 16, and of the Executive Board on Sunday, August 17, beginning at 9 a.m. The first session of the House of Representatives will convene on Monday, August 18, at 9:00 a.m.; the second session on Monday evening at 7 o'clock.

On the following pages will be found information regarding the arrangements for the meeting, the programs of the General Sessions and Sections, the Women's Auxiliary meeting and other functions for women, the Educational and Commercial Exhibits, meetings of related organizations, alumni luncheons, entertainment, and other features. The program as given herein is tentative and is subject to minor revisions.

General Officers of the Local Committee



A. G. Madden, Jr., General Chairman



R. G. Kerans, Vice General Chairman



J. L. Jones, General Secretary



J. A. Winkler, Entertainment

Chairmen of the Local Committees
Eighty-fourth Annual Meeting

Cincinnati
Aug. 18-21, 1947



S. W. Stout, Exhibits



S. G. Stephan, Hotels and Housing



G. C. Lewis, Garages and Airports



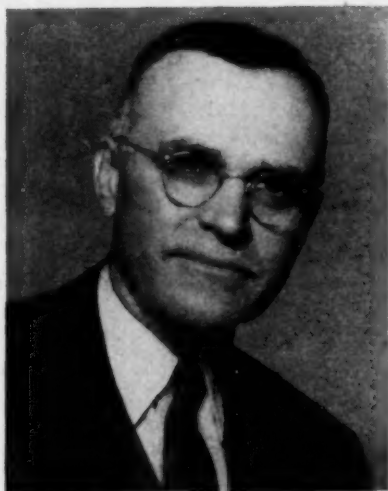
J. H. Batsche, Meeting Rooms and Equipment

Chairmen of the Local Committees
Eighty-fourth Annual Meeting

Cincinnati
Aug. 18-21, 1947



C. A. Pleuger, Publicity and Public Relations



Col. S. C. Dildine, Military Activities



A. R. Theobald, Reception and Hospitality



B. W. Bernard, Motion Pictures



J. F. Gest, Registration and Information

THE CINCINNATI SESSION

Committee on Local Arrangements

Eighty-fourth Annual Meeting

Officers

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R. G. KERANS, *Vice General Chairman*

J. L. JONES, *General Secretary*

Executive Committee

A. G. MADDEN, JR., *Chairman*

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J. F. GEST

G. C. LEWIS

S. W. STOUT

B. W. BERNARD

J. L. JONES

C. A. PLEUGER

A. R. THEOBALD

COL. S. C. DILDINE

R. G. KERANS

S. G. STEPHAN

J. A. WINKLER

Committees

Entertainment

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A. S. BARNES

PAUL BERNARD

W. M. HICKMAN

R. G. KERANS

T. P. STRITTMATTER, JR.

E. G. WAITE

J. E. WINKLER

Registration and Information

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F. R. BUTZ

A. G. PASS

R. C. SMITH

C. A. WARD

Publicity and Public Relations

C. A. PLEUGER, *Chairman*

B. AGIN

J. T. BURRISS

J. L. MCCLUNG

C. W. MONTGOMERY

Meeting Rooms and Equipment

J. H. BATSCHE, *Chairman*

ALLEN HAUCK

EDWIN HILL

FRED O'FLAHERTY

A. W. RICE

Hotels and Housing

S. G. STEPHAN, *Chairman*

G. C. LEWIS

N. H. MYERS

A. R. THEOBALD

F. P. TODD

Motion Pictures

B. W. BERNARD, *Chairman*

J. K. BUSHNELL

H. D. JACOBS, JR.

P. B. JOHNSTON

R. OSSERMAN

C. F. STROEHLIN

Reception and Hospitality

A. R. THEOBALD, *Chairman*

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W. M. COFFEE

T. W. CRAVER

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H. F. FLEMING

R. J. HOSKINS

W. E. JONES

J. H. KNAPP

W. R. KRILL

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R. E. REBRASSIER

V. T. ROSE

E. L. ROSHON

E. J. STARBUCK

P. T. WHITE

H. J. WRIGHT

Exhibits

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L. H. BREMER

C. C. GLUHM

F. N. GLUHM

R. E. HEADLEY

C. W. HIGLEY

A. H. KRAUS

L. C. LYNCH

E. C. PECK

C. H. SATER

W. SCHARTLE

Military Activities

COL. S. C. DILDINE, *Chairman*

J. H. BATSCHE

PAUL BERNARD

J. F. GEST

J. L. JONES

C. W. MONTGOMERY

J. E. NOONAN

C. A. PLEUGER

D. L. PROCTOR, JR.

S. L. SAYLOR

S. G. STEPHAN

E. G. WAITE

M. L. WILLEN

J. E. WINKLER

Garages and Airports

G. C. LEWIS, *Chairman*

R. D. JONES

L. E. OSWALT

FRED M. SAGE

VERNON THARP

(Continued on next page.)

Last Chance for Hotel Reservations at Cincinnati

If you have not yet arranged for hotel accommodations, use the reservation blank on advertising page 51 of this issue, and mail it at once to the Committee on Hotels and Housing at the address shown on the form. No confirmed reservations will be made after August 1. More than 1,000 veterinarians have already used the reservation blanks which have been printed in the JOURNAL the past six months.

THE CINCINNATI SESSION

Women's Activities

Mrs. R. G. KERANS

Co-Chairmen

Mrs. A. R. THEOBALD

Reception

Mrs. S. W. STOUT, *Chairman*
 Mrs. H. G. BOND
 Mrs. L. H. BREMER
 Mrs. J. T. BURRIS
 Mrs. T. W. CRAVER
 Mrs. E. M. DETRAY
 Mrs. S. C. DILDINE
 Mrs. J. C. FITZPATRICK
 Mrs. B. H. GIBSON
 Mrs. F. N. GLUHM
 Mrs. L. W. GOSS
 Mrs. C. J. GRIFFIN
 Mrs. J. D. GROSSMAN
 Mrs. WM. HACKETT
 Mrs. RALPH HEADLEY
 Mrs. C. W. HIGLEY
 Mrs. D. C. HYDE
 Mrs. F. J. KINGMA
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 Mrs. W. R. KRILL
 Mrs. G. C. LEWIS
 Mrs. R. M. LIVINGSTON
 Mrs. R. L. McCLAREN

Mrs. J. L. McCLUNG
 Mrs. H. M. MAUGER
 Mrs. C. W. MONTGOMERY
 Mrs. D. E. MOSSBARGER
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 Mrs. N. H. MYERS
 Mrs. FRED PAGE
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 Mrs. R. E. REBRASSIER
 Mrs. E. L. ROSHON
 Mrs. A. F. SCHALK
 Mrs. R. M. SMITH
 Mrs. E. J. STARBURCK
 Mrs. HUGH STARR
 Mrs. D. M. SWINEHART
 Mrs. E. C. WAITE
 Mrs. J. A. WINKLER
 Mrs. J. E. WINKLER

Registration and Information

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 Mrs. J. H. BATSCHKE

Mrs. B. W. BERNARD
 Mrs. F. R. BUTZ
 Mrs. MARIE COOMBS
 Mrs. A. S. ENSLEIN
 Mrs. RUSSELL HALL
 Mrs. ALLEN HAUCK
 Mrs. W. M. HICKMAN
 Mrs. A. G. MADDEN, JR.
 Mrs. C. A. PLEUGER
 Mrs. F. P. TODD

Decorations

Mrs. J. A. WINKLER, *Chairman*
 Mrs. R. E. HEADLEY
 Mrs. A. G. MADDEN, JR.

Young People's Mixer

Mrs. A. G. MADDEN, JR.,
Chairman
 RICHARD CRAVER
 MISS PHYLLIS MADDEN
 Mrs. S. W. STOUT
 JERRY THEOBALD

Message from the Chairmen of the Committee on Women's Activities

The wives of the veterinarians in the Cincinnati area are anticipating with pleasure their part in the entertainment of the mem-

bers of the Auxiliary to the AVMA, and of all the wives of veterinarians who will attend the 1947 meeting.

Registrations will open on Sunday afternoon, August 17. Your badge, program, and tickets for the various affairs of interest to the women will be given you at the time of registration. Please register early.

The opening session is scheduled for 1:00

p.m. on Monday, August 18. It is interesting to attend and all are cordially invited. Later in the afternoon at 4 p.m., an informal reception for women will be held in the Pavilion Caprice of the Netherland Plaza Hotel.

An information desk will be located near the main registration desk in the foyer of the Hall of Mirrors. Please feel free to call there for answers to your questions.

The members of the local committee have planned a number of interesting functions which we hope you all will attend and enjoy. The women of the committee will wear identifying badges and will be happy to be of help at any time.



Mrs. R. G. Kerans, Co-Chairman, Women's Activities



Mrs. A. R. Theobald, Co-Chairman, Women's Activities

THE CINCINNATI SESSION

Message from the President of the Women's Auxiliary

The Women's Auxiliary to the AVMA extends a most cordial greeting to the wives of veterinarians in America and urges them to participate in the thirtieth annual meeting of the organization in Cincinnati.

During the past year, much has been done to build a closer relationship between the



Mrs. H. Preston Hoskins, President, Women's Auxiliary

Auxiliary and its individual members. A system of affiliation between the state auxiliaries and the AVMA group is being put into operation and is proving to be a successful medium for contact with local women. The constitution is being revised to simplify elections and to make available to a larger group of women membership in the organization.

We sincerely hope that all of the women who come to the AVMA meeting will attend the Auxiliary luncheon and will become active participants in what we are doing to further the interests of the veterinary profession.

Cordially,
S/MRS. H. PRESTON HOSKINS, President.

Special Showing of "Stallion Road"

Arrangements are being made with Warner Bros. Pictures for loan of the film "Stallion Road," released a few months ago, so that it may be shown at the Cincinnati convention. This picture (see the April JOURNAL, p. 267) features Ronald Reagan in the rôle of a veteri-

narian; co-starred with him are Alexis Smith and Zachary Scott. The time has been tentatively set for 8:30 p.m., on Monday, August 18, which is open except for a meeting of the House of Representatives. The picture will be shown in the Hall of Mirrors at the Netherland Plaza and admission will be by badge only to convention registrants.

Women's Program

Sunday, August 17

Afternoon Registration of early arrivals.
Evening Open.

Monday, August 18

8:30 a.m. Registration.
9:00 a.m. View Educational and Commercial Exhibits.
1:00 p.m. Attend Opening Session.
4:00 p.m. Informal Reception and Tea tendered by Local Committee on Women's Activities.
8:30 p.m. Motion Picture "Stallion Road"—Hall of Mirrors, Netherland Plaza.

Tuesday, August 19

Morning Open.
12:30 p.m. Women's Luncheon and Entertainment, Gibson Hotel.
2:00 p.m. Annual Meeting, Women's Auxiliary.
9:00 p.m. Floor Show and Dance.

Wednesday, August 20

9:30 a.m. Sightseeing Tour.
7:00 p.m. Banquet.
10:00 p.m. President's Reception and Dance.

Thursday, August 21

10:30 a.m. Broadcast Breakfast.
Afternoon Open.



Taft Museum, Cincinnati.

New Features

Attention is invited to three new arrangements for the Cincinnati session.

Advanced Convention Registration.—To facilitate registration at the meeting and avoid, in so far as possible, standing in line for a long time to obtain badges and programs, the Committee on Local Arrangements and the AVMA office are using a system to be tried this year for the first time. It is intended to improve the handling of registrations, not only during the rush hours, but also throughout the first two days when veterinarians and their families are arriving at the convention in large numbers.

Advanced registration blanks are being mailed to all members having confirmed hotel reservations. From these, the AVMA office will prepare registration slips for each person in duplicate, returning one to the registrant. These are to be presented at the registration desk at the meeting and the already-prepared badge, program, etc., will be handed to the registrant after payment of the registration fee.

"Sitter Service" for Children.—The Committee on Local Arrangements announces that two Cincinnati hotels—the Sinton and Gibson—have a sitter service available to those parents who bring young children to the meeting and would like to arrange for them to be cared for while the parents attend some of the convention functions.

The Sinton Hotel has a "Child Care Service," newly organized, which employs women attendants between the ages of 40 and 60. The hourly rate is \$1.00 and the attendants will furnish their own transportation to the hotel and back to their homes until 10:00 p.m.; after that hour the persons hiring them must pay for the transportation from the hotel to the homes of the attendants. Persons with children staying in other hotels, but who have friends staying at the Sinton who are using the "Child Care Service," may have their children looked after by bringing them to the Sinton to stay together. In serving two families, the hourly rate will be \$2.00, or \$1.00 per hour for each family.

The Gibson Hotel has a similar service of a limited nature, requests for which must be arranged for several hours in advance.

It is believed that this new feature will be appreciated by many parents with small children who want to attend the convention but find it difficult to attend some of the

entertainment features, particularly in the evening.

Young People's Mixer.—The Local Committee is planning to make the convention as enjoyable as possible for "teen agers" who come to the meeting. To this end, a special event has been arranged for Tuesday, August 19, known as the "Young People's Mixer" to which all the daughters and sons of convention-goers are cordially invited.

Meetings of Other Organizations

Among the organizations which will hold regular or special sessions during the AVMA convention in Cincinnati are the following. Any other organizations desiring to hold meetings at that time should get in touch at once with the central office.

Association of American Veterinary Deans.

—Monday, August 18, 9:00 a.m. to 12:00 noon. Parlor H, Netherland Plaza.

American Women's Veterinary Medical Association.

—First annual session. Monday, August 18, 9:00 a.m. to 12:00 noon. Parlor G, Netherland Plaza.

Zoo Veterinarians.

—A meeting of veterinarians engaged in work at zoological gardens will be held on Monday afternoon, August 18, at 2:00 p.m. Meeting room to be announced. A program of four papers by authorities on diseases of wild animals will be presented.

Women's Auxiliary to the AVMA.

—Annual meeting, 2:00 p.m. Tuesday, August 19, following the Women's Luncheon at the Gibson Hotel.

Extension Service Veterinarians.

—All extension veterinarians at the meeting are invited to attend a brief conference from 4 to 6 p.m. on Tuesday, August 19. Meeting room to be announced.

National Conference on Veterinary Licensure.

Representatives of state veterinary examining boards will meet at a time and place to be announced.

American Animal Hospital Association.

—A luncheon meeting for members will be held on Wednesday, August 20, at 12 noon in Parlor H, Netherland Plaza.

Alpha Psi Fraternity.

—Luncheon meeting on Wednesday, August 20. Place to be announced later.

AVMA Research Council.

—A brief meeting will be held at a time and place to be announced later.

Council on Education.

—A meeting will be held during the convention at a time to be arranged by the officers of the Council.

Alumni Luncheons.

—Thursday, August 21, 12:30 p.m. The places where the various alumni groups will meet will be announced at the meeting.

THE CINCINNATI SESSION

Opening Session

Monday, August 18, 1:00 p.m.

Music.

Call to Order by President B. T. Simms.

Invocation.—

The National Anthem.

Address of Welcome.—The Honorable Carl W. Rich, Mayor of Cincinnati.

Response.—

Greetings from Women's Auxilliary.—Mrs. H. Preston Hoskins, President, Evanston, Illinois.

Music.

Address.—Dr. B. T. Simms, President.

Announcements.—Dr. A. G. Madden, General Chairman, Committee on Local Arrangements.

Presentation of Awards. ..

By Dr. W. A. Young, Chairman, Special Committee on Humane Act Award:
1947 Humane Act Award.

By Dr. B. T. Simms, Chairman *ex-officio*, Committee on Awards:
Twelfth International Veterinary Congress Prize.

Borden Award for 1947.

By Dr. C. C. Hastings, Chairman, Executive Board:

Gold Key to Incoming President.

Service Scroll to Retiring President.

4:00 p.m.

Nomination of Officers.

Informal Reception for Women.

First General Session

Tuesday, August 19, 8:30 a.m.

Motion Picture.

Attenuation of Hog Cholera Virus by Passage in Rabbits.

J. A. Baker, Princeton, N. J.

Nervous Diseases of Dogs.

C. F. Schlotthauer, Rochester, Minn.

Animal Skin Diseases and Their Influence on Leather.

Fred O'Flaherty and Wm. T. Roddy, Cincinnati, Ohio.

Symposium on Foot-and-Mouth Disease:

Jose Figueroa, Mexico.

M. S. Shahan, Washington, D. C.

The Honorable George W. Gillie, Washington, D. C.

12:00 Noon

Adjourn for luncheon period.

Second General Session

Tuesday, August 19, 1:30 p.m.

Motion Picture.*

A Study of Equine Fistulous Withers and Poll Evil.

L. M. Roderick, Alice Kimball, W. M. McLeod, and E. R. Frank, Manhattan, Kan.

The Blood Groups in Cattle.

L. C. Ferguson, Columbus, Ohio.

Four Decades of Veterinary Progress.

J. A. Barger, Des Moines, Iowa.

Equine Encephalomyelitis in New Jersey Pheasants in 1945 and 1946.

F. R. Beaudette and J. J. Black, New Brunswick, N. J.

Developments Affecting the Army Veterinary Service.

Col. James A. McCallam, Washington, D. C.

Third General Session

Wednesday, August 20, 11:00 a.m.

Associations and the Sherman Act.

A. L. Hodson, Chicago, Ill.

Employer-Employee Relationships.

E. E. Slatter, Danville, Ill.

Veterinary Services and Methods.

W. J. Rumney, Hamilton, Ont.

A National Board of Veterinary Examiners.

W. R. Krill, Columbus, Ohio.

12:30 p.m.

Adjourn for luncheon period.

Fourth General Session

Thursday, August 21, 11:00 a.m.

Motion Picture.

Radioactive Isotopes in Veterinary Medicine.

W. D. Armstrong, Minneapolis, Minn.

Installation of Officers.

12:30 p.m.

Adjournment.

THE CINCINNATI SESSION

Section Programs Section on Small Animals



H. S. McDonald, Toronto, Ont., Chairman



Mason Weadon, Washington, D. C., Secretary

First Session—Wednesday, August 20, 8:30 a.m.

Motion Picture.

Opening Remarks by the Chairman.

Report of Secretary.

Diseases of the Thorax and Abdominal Cavities in the Dog.

Wm. J. Lentz and James H. Mark, Philadelphia, Pa.

Leptospirosis.

Col. Raymond Randall, Washington, D. C.

Traumatic Injuries in Small Animals.

E. A. Ehmer, Seattle, Wash.

Panel Discussion on Ethics and Business Methods:

Moderator: Raymond C. Snyder, Upper Darby, Pa.

A. R. Theobald, Cincinnati, Ohio.

Charles Rife, Atlanta, Ga.

Gerry B. Schnelle, Boston, Mass.

J. Raymond Curry, Washington, D. C.

11:00 a.m.

Adjourn for General Session.

Second Session—Thursday, August 21, 8:30 a.m.

Motion Picture.

Nominations for Section Officers.

Intratracheal Anesthesia.

John D. Gadd, Towson, Md.

Small Animal Practice Procedures.

E. J. Frick, Manhattan, Kan.

Clinical Interpretation of Some Recent Developments in Nutritional Research.

M. L. Morris, New Brunswick, N. J.

Panel Discussion on Distemperoid Virus (Greene) in Practice:

Moderator: James A. Edgett, Hartford, Conn.

H. H. Groth, San Mateo, Calif.

John La France, Binghamton, N. Y.

Joseph B. Engle, Summit, N. J.

C. P. Zepp, New York, N. Y.

11:00 a.m.

Adjourn for General Session.

Section Programs

Section on Poultry



B. S. Pomeroy, St. Paul, Minn., Chairman



John P. Delaplane, Kingston, R. I., Secretary

First Session—Wednesday, August 20,
8:30 a.m.

Motion Picture.

Opening Remarks by the Chairman.

Report of Secretary.

Modified Newcastle Virus Vaccines.

R. L. Reagan, Mary G. Lillie, L. J. Poelma,
and A. L. Brueckner, College Park, Md.

The Effect of Certain Chemical Agents on the
Virus of Newcastle Disease of Chickens.

C. H. Cunningham, East Lansing, Mich.

Newcastle Disease.

O. L. Osteen and W. A. Anderson, Patho-
logical Division, Bureau of Animal Industry,
Washington, D. C.

Panel Discussion on Newcastle Disease:

F. R. Beaudette, New Brunswick, N. J.

H. E. Moses, Lafayette, Ind.

E. Jungherr, Storrs, Conn.

C. A. Brandly, Madison, Wis.

T. C. Byerly, Washington, D. C.

11:00 a.m.

Adjourn for General Session.

Second Session—Thursday, August 21,
8:30 a.m.

Motion Picture.

Nominations for Section Officers.

New Types of Fowl Paralysis Artificially Pro-
duced by Direct Blood Transfusion.

A. J. Durant and H. C. McDougale, Colum-
bia, Mo.

Naturally Acquired Passive Immunity to In-
fectious Bronchitis in Chicks.

E. Jungherr and N. Terrill, Storrs, Conn.

Sulfathiazole as an Aid to Control of Fowl
Cholera.

H. M. Devolt, College Park, Md.

Chemotherapy in Fowl Cholera.

J. O. Alberts, Urbana, Ill.

Suitability of *Salmonella pullorum* Strains
Used in the Agglutination Test for Pullorum
Disease Control.

M. L. Wright, Guelph, Ont.

11:00 a.m.

Adjourn for General Session.

Section Programs
Section on Surgery and Obstetrics



M. A. Emmerson, Ames, Iowa, Chairman



C. S. Bryan, East Lansing, Mich., Secretary

First Session—Wednesday, August 20,
8:30 a.m.

Motion Picture.

Opening Remarks by the Chairman.

Report of Secretary.

Why Our Hormone Treatments Sometimes Fail.

C. F. Cairy, East Lansing, Mich.

A Study of the Placenta of the Cow.

H. E. Kingman, Cheyenne, Wyo.

Clinical Diagnosis and Treatment of Breeding Unsoundness in Cows.

J. W. Cunkelman, East Lansing, Mich.

The Causes and Diagnosis of Infertility in Bulls.

G. R. Moore, Manhattan, Kan.

11:00 a.m.

Adjourn for General Session.

Second Session—Thursday, August 21,
8:30 a.m.

Motion Picture.

Nominations for Section Officers.

Forsell's Operation for Correction of Cribbing.

J. D. Gadd, Towson, Md.

A Newly Developed Anesthetic for Large Animals.

E. W. Millenbruck, Carthage, Mo.

Some Clinical Observations in the Prevention and Treatment of Shock by Intravenous Gelatin.

Mark Allam, Philadelphia, Pa.

Sterility in Swine.

L. M. Hutchings, Lafayette, Ind.

11:00 a.m.

Adjourn for General Session.

THE CINCINNATI SESSION

Section Programs Section on General Practice



James C. Carey, West Liberty, Iowa, Chairman



L. A. Dykstra, Aurora, Ill., Secretary

First Session—Wednesday, August 20,
1:30 p.m. *

Motion Picture.
Opening Remarks by the Chairman.
Report of Secretary.
Foot-and-Mouth Disease Intradermic Vaccination.
Carlos Rosenbusch, Buenos Aires, Argentina.
Wing Amputation of Birds in Lieu of Pinioning.
W. A. Young, Chicago, Ill.
Baby Pig Disease.
George A. Young, Austin, Minn.
Panel Discussion on Ethics and Business Methods:
Moderator: J. T. Schwab, Oconomowoc, Wis.
B. H. Gibson, London, Ohio.
E. W. Krueger, Evansville, Wis.
E. A. Davis, Columbus, Ga.

Second Session—Thursday, August 21,
2:00 p.m.

Motion Picture.
Nominations for Section Officers.
Swine Practice.
J. C. Kaiser, Rockwell, Iowa.
The Differential Diagnosis of Mastitis Cases in the Field.
W. D. Pounden, Wooster, Ohio.
Treatment of Pneumonia in Cattle.
S. J. Roberts and George K. Kiesel, Ithaca, N. Y.
Control of Brucellosis in Practice.
John F. Rankin, Astoria, Ore.

Attention: Baseball Fans

The only big league game scheduled for the week of the AVMA convention is a double-header between the Cincinnati Reds and Chicago Cubs on Sunday afternoon, August 17.

THE CINCINNATI SESSION

Section Programs

Section on Sanitary Science and Food Hygiene



James H. Steele, Washington, D. C., Chairman



Hubert Shull, Texarkana, Texas, Secretary

**First Session—Wednesday, August 20,
1:30 p.m.**

Motion Picture.

Opening Remarks by the Chairman.

Report of Secretary.

The Public Health Significance of Animal Salmonella Infections.

Arthur Wolff, Lansing, Mich.

Veterinary Public Health Administration.

Martin D. Baum, Los Angeles, Calif.

Efficacy and Duration of Canine Rabies Vaccine.

Ernest S. Tierkel, Montgomery, Ala.

Poultry Inspection as Part of the Public Health Program.

Paul Brandly, Washington, D. C.

Quaternary Ammonium Compounds as Disinfectants in Veterinary Practice.

E. C. McCulloch, Pullman, Wash.

**Second Session—Thursday, August 21,
2:00 p.m.**

Motion Picture.

Nominations for Section Officers.

Veterinary Public Health and the Army.

M. B. Starnes, Baltimore, Md.

Panel Discussion on Veterinary Public Health:

Moderator: L. E. Burney, Indianapolis, Ind.

L. C. Near, Middletown, Ohio.

N. J. Miller, Eaton, Colo.

J. H. Steele, Washington, D. C.

New Directory Out About July 15

Due to unforeseen complications, printing of the 1947 AVMA Directory has been delayed far beyond the date originally set for publication.

It is now expected that it will go to press about July 1 and that copies will be ready for mailing, to those who ordered them, about July 15.

THE CINCINNATI SESSION

Section Programs Section on Research



Renald Gwatkin, Ottawa, Ont., Chairman



James M. Murphy, Branchville, N. J., Secretary

First Session, Wednesday, August 20, 1:30 p.m.

Opening Remarks by the Chairman.

Report of Secretary.

Observations on the Pathology of Brucella Infection in Swine.

A. L. Delez, L. M. Hutchings, and C. R. Donham, Lafayette, Ind.

The Etiology of Swine Dysentery.

L. P. Doyle, Lafayette, Ind.

Species Susceptibility to the Viruses of Carré and Feline Panleucopenia.

L. J. Goss, New York, N. Y.

Acute Pulmonary Emphysema in Cattle.

F. W. Schofield, Guelph, Ont.

Utility of the Hotis Test as an Indication of Coagulase-Positive Staphylococci in Milk Samples.

O. W. Schalm, Berkeley, Calif.

Renal Tubular Excretion of Penicillin.

K. A. Beyer, Glenolden, Pa.

Second Session, Thursday, August 21, 2:00 p.m.

Motion Picture.

Nominations for Section Officers.

Ketosis.

J. C. Shaw, College Park, Md.

Research on Swine Brucellosis in the Bureau of Animal Industry.

C. A. Manthei, Beltsville, Md.

Brucella Therapy.

C. M. Cotton and R. E. Swope, College Park, Md.

Post-Treatment Occurrence of Streptococcal Infection of the Bovine Udder.

James M. Murphy, Ithaca, N. Y.

Educational Exhibits

L. M. RODERICK, ALICE KIMBALL, E. R. FRANK, AND W. M. MCLEOD
KANSAS STATE COLLEGE

An exhibit portraying, by means of photographs and enlarged color pictures, the findings in experimental and field cases of fistulous withers and poll evil in horses, including some new observations on its anatomic, bacteriologic, pathologic, and surgical features.

N. R. BREWER, L. E. FISHER, AND R. P. LITT
NATIONAL SOCIETY FOR MEDICAL RESEARCH

This exhibit will portray some of the work of the National Society for Medical Research in its educational program to inform the public of the benefits of research conducted on animals, including some of the recent advances in medicine and surgery. There will be a demonstration relating to the "blue baby" operation, and one on bronchoscopy; also, results of studies on blood substitutes for transfusion purposes.

ARMY VETERINARY CORPS

The work of the Army Veterinary Corps at home and abroad, the latter in connection with the military governments of occupied countries, will be shown; also the research program and developments in food inspection activities of the veterinary military service.

FRED O'FLAHERTY AND WILLIAM T. RODDY
UNIVERSITY OF CINCINNATI

An exhibit showing the effects of various skin diseases on the hides of leather-producing animals, particularly cattle, swine, and goats, and studies on these diseases conducted under the sponsorship of the Tanners' Council.

H. L. FOUST, CHAIRMAN

AVMA SPECIAL COMMITTEE ON VETERINARY SERVICES

Continuing the studies presented in previous years, this exhibit will show, graphically, the relationship of the veterinary population to the livestock population and shifts in the human population in the United States.

H. W. SCHOENING, J. D. RAY, AND L. VAN ES
AMERICAN VETERINARY MEDICAL ASSOCIATION

An exhibit on Swine Erysipelas, prepared under AVMA sponsorship for the Centennial Session of the American Medical Association in Atlantic City, June, 1947. This exhibit portrays the distribution of *Erysipelothrix rhusiopathiae* infection in swine in the United States, its occurrence in other domestic animals and in man, and control methods.

AVMA PUBLIC RELATIONS DEPARTMENT

The public educational program conducted throughout the year by the Association will be portrayed, including radio material, news releases to the press, farm and livestock journals, and the new "Clip Sheet" which is circulated monthly to 5,000 rural newspapers, all for the purpose of informing the public and livestock owners on the many aspects of veterinary service.

AVMA AND U. S. PUBLIC HEALTH SERVICE

A series of panels depicting the varied aspects of veterinary medicine including education and research, licensure, federal and state livestock disease control, veterinary public health work, Army Veterinary Corps, etc.

S. W. HAIGLER, R. A. MERRILL, AND R. C. SNYDER

AVMA SPECIAL COMMITTEE ON CODE OF ETHICS

This exhibit is designed to help answer the questions received by the AVMA and the Committee as to what constitutes proper and improper directory listings for veterinarians and veterinary hospitals.

Commercial Exhibits

The largest number of companies ever represented at an AVMA convention will participate in the commercial exhibits feature of the Cincinnati session. Forty-five firms will display their products and each one will offer something of interest to visiting veterinarians.

The following brief descriptions tell something of the showing that will be made by the various manufacturers and distributors. In addition, a number of them have furnished special copy for their advertisements in this "Convention Number" of the JOURNAL. Attention is especially invited to the advertising sections of this issue which contain announcements of our regular clients and several new ones.

The exhibits will open at 9:00 a.m. on Monday, August 18. Since there is no regular program that morning, the forenoon will offer an excellent opportunity for the first trip through the exhibit section immediately after registration. Admission to the exhibits will be by badge only. The regular exhibit hours after the opening day will be from 9:00 a.m. to 5:30 p.m. daily.

ABBOTT LABORATORIES Booth 26

Such popular Abbott products as Nembutal, Pentothal Sodium, Tincture Metaphen, Prepared Intravenous Solutions, Sulfathiazole Cream, Penicillin Specialties, Sulvetil, and Abbott Vitamin Products will be on display. Abbott Laboratories extends a cordial invitation to all veterinarians to make the Abbott booth headquarters during the week of the convention.

ALLIED LABORATORIES, INC. Booths 33 and 34

Allied Laboratories, Inc., Pitman-Moore Division, will give prominence in its exhibit to products developed by its research department, including Parenteral Solution Di-Sulfalac, combining sulfathiazole, sulfapyridine, and supportive nutrients; Mercaptocaine Creme, a combination external parasiticide and local anesthetic, and K-Pins, a recently developed device to control the action of diethylstilbestrol implants.

AMERICAN OPTICAL COMPANY Booth 38

The Scientific Instrument Division of the American Optical Company will exhibit a new, pocket-size hemoglobinometer, known as the Hb-Meter. Independent of laboratory equipment, it can be used for on-the-spot measurements of hemoglobin concentration. The "Bright-Line" Haemacytometer and several standard microscopes of Spencer quality will also be shown.

AMES COMPANY, INC. Booth 51

Ames Company representatives will demonstrate Clinitest, Albutest, and Hematest—simplified tests for the detection of urine-sugar, albumin, and occult blood. They will be glad to discuss Decholin and Decholin Sodium.

ARMOUR AND COMPANY Booth 7

The Armour and Company Veterinary Division exhibit at Cincinnati will feature many unique Armour products, including glandular products and surgical sutures. Armour's anti-hog cholera serum, a leading and widely used product, will be a prominent part of the display.

THE CINCINNATI SESSION

ARMSTRONG FOOD COMPANY (BORDEN)

Booth 45

Esbilac, the simulated bitch's milk, originally developed as Formula 107-A by The Borden Research Laboratories before the war, and Armstrong Dog Meal, a vitamin-guaranteed basal food made to supply known nutritional requirements of growing and breeding dogs, will be featured in the Armstrong exhibit.

ARNOLD LABORATORIES

Booth 14

Arnold Laboratories of New Castle, Ind., will exhibit instruments and pharmaceuticals produced for the exclusive use of the graduate veterinarian. Dr. Lee H. Osborn will be in charge and Mr. Antonio Orpi, export manager, will look forward to talking with Latin American buyers.

ASHE LOCKHART, INC.

Booth 28

Ashe Lockhart, Inc. will exhibit biological products, including antisera, vaccines, bacterins, toxoid, and diagnostic agents. Specimens and photographs of educational value also will be on view.

BALTIMORE WIRE & IRON WORKS

Booth 11

Veterinarians are invited to inspect the steel cages fabricated by the Baltimore Wire & Iron Works and see the thermostatically controlled cabinet dog dryer in operation, and figures on its drying time based upon actual clinical experience. Information will also be available concerning standard or custom built cages of any size.

BARD-PARKER COMPANY, INC.

Booth 3

Bard-Parker Rib-Back surgical knife blades; surgical knife handles, including long handles for deep surgery, laboratory handles, and hysterectomy and eye handles; Bard-Parker Germicide, a sporicidal solution; instrument sterilizing containers; Chlorophenyl, an ideal office instrument disinfectant; hematological cases for obtaining blood specimens, and pipettes.

BECTON, DICKINSON & COMPANY

Booth 9

Becton, Dickinson & Company will exhibit B-D Vacutainer equipment for taking blood specimens, in addition to the usual line of B-D veterinary specialties. Mr. R. N. Shaw and Mr. L. C. Mourey will attend the exhibit to demonstrate the use of Vacutainer equipment and to answer questions pertaining to the B-D veterinary line.

BILHUBER-KNOLL CORPORATION

Booth 36

The Bilhuber-Knoll Corporation will be glad to have veterinarians drop in and talk over the Company's dependable and useful everyday original medicinal chemicals. Among those on display are Metrazol—restorative and stimulant; Calciphos—calcium therapy; Lenigallol—local therapy for skin diseases; Tannalbin—intestinal astringent, and their other dependable drugs.

CAMPBELL X-RAY CORPORATION

Booth 35

Campbell X-Ray Corporation of Boston will exhibit their New Model X-Ray Animagraph. This outfit, designed specifically for the exclusive use of the veterinarian, provides complete fluoroscopy, radiography, and skin therapy both in and away from the hospital.

THE CINCINNATI SESSION

CARNATION COMPANY

Booth 12

Veterinarians are invited to visit the Friskies booth where they will see an attractive display showing the many types of dogs successfully fed on Friskies Dog Food. Valuable literature on Friskies will be distributed and the proper method of feeding both Friskies Cubes and Friskies Meal will be demonstrated.

COMSTOCK PUBLISHING COMPANY, INC.

Booth 2

The Comstock exhibit will be concerned with Comstock publications in veterinary medicine, both text and reference. Sample copies of the *Cornell Veterinarian*, which is published by the Comstock Publishing Co., Inc., will also be available.

THE CORN STATES SERUM COMPANY

Booths 21 and 22

The exhibit of The Corn States Serum Company will consist of samples of many biological products produced by the company, and specialties; also products of firms represented as distributors.

CURTS-FOLSE LABORATORIES

Booth 30

A background of the firm's label, with pharmaceuticals and instruments arranged for inspection, is the plan of the Curts-Folse Laboratories' exhibit.

CUTTER LABORATORIES

Booth 53

Cutter Laboratories will present biologicals, featuring BTV (Boynton's Tissue Vaccine) for hog cholera. Also on display will be intravenous solutions, penicillin specialties, and vacuum blood transfusion equipment.

EISELE & COMPANY

Booth 44

Eisele & Company will exhibit their complete line of Green hypodermic syringes. They will also show their veterinary thermometers, syringes, and needles. They hope all their old friends in the veterinary profession will visit their booth.

FORT DODGE LABORATORIES, INCORPORATED

Booths 46 and 47

The Fort Dodge exhibit will feature new items such as Formula 144 Tablets for blackhead in turkeys, Reconcil for the control of tapeworms in poultry, and Newcastle Disease Vaccine. This display will also include many up-to-date antibiotics and pharmaceutical products of interest to the profession.

GAINES DIVISION—GENERAL FOODS CORPORATION

Booth 8

The makers of Gaines dog foods will have an educational display on the work of the Gaines Dog Research Center and the Gaines Research Kennels. Attendants will be on hand at the booth to answer any questions visiting veterinarians may have for them.

GOSHEN LABORATORIES, INC.

Booth 54

Goshen Laboratories' display will comprise products manufactured by Goshen Laboratories, Inc., also those manufactured by Ciba Pharmaceutical Products, Inc., Summit, N. J. In addition, Goshen Laboratories will display products for which they are sole agent: Goodwinol, Hydrophen, Lecipet, Numotizine, Pippin Dog Comb, Tickaway, Tocalin, and vitamins of the U. S. Vitamin Corporation.

THE CINCINNATI SESSION

HAVER-GLOVER LABORATORIES

Booths 23 and 24

An array of practice requirements of interest to general practitioners, including newer listings of biological products, pharmaceuticals, and instruments, will be on display at the Haver-Glover exhibit. An illuminated background for the exhibit will attract and invite the friendly contacts made possible at the convention.

HILL PACKING COMPANY

Booth 49

Hill Packing Company, Topeka, Kansas, processors and packers of Hill's Fresh Frozen Horse Meat, U. S. Inspected and Passed, and Hill's Dog Food, 8-Up Dog Food, and Sky-Hy Dog Food, will have a display booth where company representatives will welcome old acquaintances and new friends. Inquire about their special offer to veterinarians.

JENSEN-SALSBERY LABORATORIES, INC.

Booths 16 and 17

Jensen-Salsbery Laboratories, Inc., will exhibit representative items featuring new developments in pharmaceutical and biological therapy, together with a complete line of surgical supplies for both large and small animal practice. The exhibit will also carry essential and special equipment for artificial insemination, ligatures, syringes, etc.

THE KELLEY-KOETT MANUFACTURING COMPANY

Booth 15

The American Electric Mobile Unit on display is a practical unit for radiography and fluoroscopy in the office, clinic, or hospital. It incorporates the unique "Powerhead" with the replaceable cartridge, eliminating the need for a serviceman—a new concept in x-ray service.

KELLOGG COMPANY

Booths 4 and 5

Gro-Pup Dog Food in Ribbon, Meal, and Pel-ett forms will be featured at the Kellogg booth. Orders for free quantities of the "Your Dog" book, designed for veterinarians to give to new dog owners, will be received at the exhibit. Details covering Gro-Pup ingredients and feeding instructions will be available.

KIRSCHNER MANUFACTURING COMPANY

Booth 18

Kirschner Manufacturing Company invites all veterinarians to visit their booth and discuss their problems in fracture work. Of particular interest to small animal practitioners will be the Kirschner-Ehmer Splint and the Zephyr Drying Kennel, both of which will be displayed and demonstrated.

LEDERLE LABORATORIES

Booth 42

Lederle Laboratories Division of American Cyanamid Company will show their complete line of veterinary biological and pharmaceutical products. Outstanding among these on display will be Sulmet (brand of Sulfamethazine), Sulfaguandine, Canine and Feline Distemper products, Veticillin, and Veta-Merazine. Complete information on the entire Lederle line will be available.

THE CINCINNATI SESSION

LLOYD BROTHERS, PHARMACISTS, INC.

Booth 27

Lloyd Brothers, Pharmacists, Inc., are exhibiting products resulting from 76 years of pharmaceutical manufacturing experience. Products indicated in the treatment of diarrhea in both large and small animals, mastitis, skin affections, and other diseases will be exhibited. Samples and literature will be available.

MERCK & CO., INC.

Booth 29

A three-panel display describing uses of some Merck products in veterinary medicine. One panel will deal with penicillin, its proven uses and probable ones, along with a chart listing animal pathogens susceptible to penicillin *in vitro*. The other panels will mention advantages and uses of two popular specialties, Lentin Merck and Canex Merck.

THE NATIONAL LABORATORIES CORPORATION

Booth 6

The National Laboratories of Kansas City will feature a full line of biological and pharmaceutical products and other supplies for use by, and sales exclusively to, the licensed, graduate veterinarian.

NORDEN LABORATORIES

Booths 31 and 32

Norden Laboratories will feature Bolet Sextuplets, Quseptic—all purpose disinfectant, Surol—dual purpose sulfa solution, Lipellets—pellets that “de-crow” and “tenderize” cockerels, and a selection of calcium products for every need, in addition to a complete display of analytically-controlled pharmaceuticals, alum-precipitated bacterins, triple-tested serums, and instruments—all from a new display.

ORTHO PHARMACEUTICAL CORPORATION

Booth 10

Ortho Pharmaceutical Corporation will again present the product Pre-Servisal, the scientific approach to bovine infertility problems. Pre-Servisal is the result of research sponsored and conducted by the company and has been found, on practical field trials, to be most effective in breeding difficulties uncomplicated by infection or organic obstruction.

PROFESSIONAL EQUIPMENT COMPANY

Booth 48

On exhibition will be a specially designed fluoroscopic and radiographic x-ray apparatus for small animal hospitals. Priced at less than \$1,000. Veterinarians are cordially invited to visit Booth 48.

THE QUAKER OATS COMPANY

Booth 37

The exhibit will feature a display of Ken-L-Ration, a Government inspected food, made from Government inspected horse meat fully fortified, and which has had over a quarter of a century of research and test work.

RALSTON PURINA COMPANY

Booth 39

The Ralston Purina Company exhibit will set forth the Purina policy as to the fields of service to poultry and livestock producers by the veterinary profession and the Purina organization.

RANDALL FAICHNEY CORPORATION

Booth 19

The well-known “Viking” line of syringes and needles will be exhibited again this year. Many product improvements have been made, and convention visitors will find new items on display that have been accepted as worthy companions for their standard line so well known to the profession the world over.

THE CINCINNATI SESSION

SHARP & DOHME, INC. Booth 50

Sharp & Dohme will exhibit pharmaceutical and biological products. These will include some of the newer sulfonamides, antibiotics, "Lyovac" *Brucella abortus* vaccine (desiccated), and "Lyo B-C," lyophilized B-complex, and ascorbic acid. Numerous other products of interest to both large animal and small animal practitioners will be on display.

R. J. STRASENBURGH COMPANY Booth 20

Sixty-one years of pharmaceutical research in the service of veterinary medicine has produced many outstanding products under the R. J. Strassenburgh Co. label. These will be on display and full information may be obtained at the Strassenburgh exhibit.

SWIFT & COMPANY Booth 43

Swift & Company again will have a colorful and informative display at the Association's annual meeting. The exhibit will feature Pard in cans and Swift's Dog Meal.

THE UPJOHN COMPANY Booth 55

The Upjohn Company exhibit will include a section on their new hemostatics, Gelfoam and Thrombin, and a section on their germicide, Tincture Mercresin and Mercresin Cream. Upjohn vitamin products will also be displayed. Literature and samples of products will be available.

WHITE LABORATORIES, INC. Booth 52

White Laboratories of Newark, N. J., will display their veterinary specialties. Detailed research information will be given on AnD-Olene Ointment, an anti-septic soluble base A & D ointment made from high potency fish-liver oils; Tyrolene, tyrothricin-sulfanilamide supplied as liquid or ointment; Feridum, a new ferrous complex, supplied as liquid or tablet; and Pyrothane Liquid, a tick, flea, and louse shampoo.

WILSON & Co., INC. Booth 25

Ideal Dog Food in cans will be displayed again. All ingredients are carefully selected for their food value for dogs and cats. Ideal labels will bear the new U. S. Government inspection legend as soon as present label supply is exhausted.

WINTHROP CHEMICAL COMPANY, INC. Booth 41

Winthrop Chemical Company, Inc., will exhibit some of their original synthetic pharmaceutical products for veterinary surgery and medicine such as Neoprontosil, the injectable sulfonamide; Novocain, for local anesthesia; Istizine, a non-gripping laxative; and Nemural and Fuadin—tapeworm and heartworm treatments, respectively. Also, Distemperoid Virus (Fromm Laboratories) for immunizing dogs against distemper and for therapeutic use in early cases.

The Mexican Outbreak of Foot-and-Mouth Disease. V.

Beginning with the March issue, the JOURNAL has carried, each month, a summary of developments in the battle being waged in Mexico to stamp out the outbreak of foot-and-mouth disease which started there last November.—THE EDITORS.

"Progress in the foot-and-mouth disease eradication program in Mexico is being accelerated with the daily arrival of United States personnel, equipment, and supplies," said Dr. B. T. Simms, Chief, Bureau of Animal Industry, in a statement released May 27. "Our people are working side by side with Mexican veterinarians, appraisers, and other workers in the common fight to eliminate the disease from Mexico and prevent its spread into the United States," he said.

The statement continues as follows:

The procedures used in the eradication campaign vary somewhat from the standard slaughter and burial method which has always been used successfully in outbreaks of this disease in the United States. The change in method involves the salvage within the main quarantine zone of animals in herds not yet affected, or entirely recovered, and which are apparently healthy. This change was agreed upon by representatives of the United States and Mexico meeting in Mexico City in January of this year, and subsequently authorized by Congress when appropriations for the work were granted. It was recognized that the size of the area in the main quarantine zone had grown so large before adequate quarantine measures were adopted that a strict adherence to the slaughter and burial method would effect a serious disruption of the economy of that area, which has a population of almost 6,000,000 people. Under the circumstances, inclusion of a program of orderly marketing within the zone is regarded as offering the greatest promise of ultimate success of the campaign.

The quarantine lines around the main zone and the outlying smaller infected areas are maintained by regular Mexican army troops. Shipments of susceptible animals into the quarantine zones are for immediate slaughter only and no shipment of susceptible animals is permitted to leave the quarantine zones. All products and byproducts of animals slaughtered for food are to be consumed or destroyed within the quarantine areas. No meat or similar products are to be shipped from these zones or to provision outgoing ships or other carriers.

The plan is to eliminate the infection first in the smaller outlying areas and then gradu-

ally to eradicate the disease in the main zone.

As part of the plan to maintain the agriculture of the areas involved, the Mexican government with the assistance of the United States is replacing work cattle destroyed in the eradication program with mules and, in some cases, tractors. As mules are not susceptible to foot-and-mouth disease they can be used on the premises immediately following the removal of susceptible livestock. Many of the mules will be purchased in the United States.

PERSONNEL AND EQUIPMENT MOBILIZED

Meanwhile, all available resources are being utilized to speed up the slaughter of cattle and other animals affected with foot-and-mouth disease. The intensified campaign is dependent upon the arrival of personnel, equipment, and supplies from the United States. Automotive and heavy equipment is especially needed to bring the veterinary field forces the mechanical assistance required for swift and effective operations. Nearly 100 BAI employees, including about 30 veterinarians, are now on the job, working with Mexican government representatives. Most of the heavy equipment is already in Mexico, most of it being U. S. Army surplus; 130 carloads of material and equipment had been received in, or was en route to, Mexico City by June 1.

The equipment includes track-type, gasoline-powered shovels for digging burial pits; bulldozers, capable of moving large quantities of earth, to expedite burial of slaughtered animals; jeeps for the transportation of personnel and light supplies; high-wheeled trucks for use on high-crowned or rutted roads; ambulances for conversion into mobile offices for paymasters (owners of condemned animals are paid in cash on the spot); tank trucks and mobile spray units for disinfection purposes; and huge semi-trailers for hauling power shovels and bulldozers to scenes of operation.

Also, over 200,000 lb. of soda ash for disinfecting solution and numerous ship-

ments of protective clothing, rubber boots, gloves, and other items have been sent to Mexico City where they are being warehoused and a machinery maintenance center set up in buildings of the old National Agricultural College.

U. S.-OWNED RANCHES AFFECTED

A number of large ranches in Mexico are owned and operated by United States citizens, and some of these are in the quarantined area. A USDA release dated May 22, 1947, stated that 586 of the infected animals on a ranch belonging to David C. Jeffcott had been slaughtered and buried; the ranch is located about 40 miles south of Mexico City and the condemned animals included beef cattle, sheep, and a small number of pigs and dairy cows.

ADVISORY COMMITTEE VOICES CONCERN

In the meantime, all possible speed in the eradication work, a protective fence along the Mexican-United States border to prevent unauthorized movement of animals across the line, and increasing vigilance along the border and at coast ports to prevent entry of prohibited fresh meat, ships' garbage, animal byproducts, hay and straw, has been urged by an advisory committee recently appointed by Secretary of Agriculture Anderson, according to a release on May 28. Grave concern was voiced about the surplus cattle in northern Mexico which normally move into the United States as feeders. Pastures and feed supplies in the northern states of Mexico are insufficient to support the large and increasing number of animals that are being held there. Measures are being studied to determine what can be done to market the meat from the surplus animals for consumption in Mexico.

Penicillin Allergy in Hospital Workers.—Dramatic symptoms of penicillin allergy, including urticaria, photophobia, and nasal congestion, occurred in female hospital workers. One was a nurse who handled the drug, while another worked in the same room where it was being prepared but did not handle it. The symptoms disappeared when the workers were kept away from the drug. It is estimated that less than 1 per cent of those handling penicillin develop allergic reactions to it.—*Ann. Allergy*, 5, (Mar.-Apr., 1947): 102-104.]

Multiple Antigens

The long outmoded blunderbus medication of other days began to take form in biological therapy about twenty years ago when the old two-dose method of typhoid vaccination became a one-dose procedure: typhoid-paratyphoid vaccination. On the heels of that short cut came diphtheria-pertussis vaccine and later diphtheria-typhoid-paratyphoid-pertussis-tetanus type of combined active immunization against the whole group of infections indicated. The work of Ramon in France and of Foley in Quebec raised the question of simultaneous antibody response to each component of the given injection to the end that the different antigens contained are now thought to actually aid one another in the production of their respective antibodies. That the idea has its limitations is, of course, admitted. Response to antigens varies with age, for example, and the durability of artificially induced immunity is not the same for each disease. For some infectious diseases, vaccinal immunity vanishes at different times and in others it is fortified by aging. The moment for giving the "booster" or "recall" dose is, therefore, a deterrent to general multiple immunization by vaccination. But that does not signify that certain selected combinations are not a long step toward practicable mass vaccination—the usual kind practiced in veterinary medicine.

The multiple antigen idea in veterinary practice was outlawed in the early 1930's when the use of "mixed infection bacterins" was abruptly disapproved instead of an attempt being made to lift the product to a higher scientific level. There are capable Cornbelt practitioners who are not so sure that stopping their use was a step forward or backward since comparable combinations were gaining a favorable rating in human medicine. In retrospect, it seems evident that the mixed infection bacterin of swine practice, at least, was never given a chance to prove its worth.

The one-dose multiple antigen idea of immunizing young animals *en masse* against infections likely to overtake them later in life is hard to beat *per se* and with-in limitations to be worked out is not unsolvable in the light of modern knowledge.

Incidence of Respiratory Diseases Among Calves of Beef Breeds

This report is an analysis of a questionnaire prepared and circulated by the 1945-1946 Committee on Diseases of Beef Cattle, the members of which were H. E. Kingman, Sr., chairman, A. R. Campbell, J. C. Carey, L. M. Darst, E. R. Frank, L. R. Vaeter, and O. E. Wolfe.

The Committee on Diseases of Beef Cattle, whose membership was well-distributed across the continent, was not in a position to investigate any other phase of respiratory disease in calves other than obtaining a rough estimate of the incidence and a few general opinions.

The information obtained by a preliminary survey of the problem is of value, in that it may not need to be repeated in a more systematic study of the situation. The Committee needed this information for the purpose of stimulating interest in the problem and to get some idea of its seriousness. It was thought that if sufficient evidence could be obtained relative to losses sustained from respiratory diseases of calves, money, equipment, and talent might be forthcoming to insure a more thorough investigation.

A set of 12 questions was sent to more than 100 persons actively engaged in some phase of raising beef cattle: breeders, practicing veterinarians, state and federal livestock sanitary officials, extension veterinarians, etc. Each question is presented, along with a digest of the replies.

1) What was the mortality and incidence of respiratory diseases in beef cattle in your territory in 1945 in comparison with other years?

Reports from 17 states and Canada, most of them based solely on field experience, indicate a serious problem in some states but not in all. Those reporting increased prevalence were nullified by those observing a decrease.

2) What do you consider the chief causes of respiratory diseases in beef cattle?

The 84 opinions were so divergent as to emphasize the need for intensifying the studies of the causes of respiratory diseases in beef cattle. Management was mentioned 17 times, transportation 16, bacteria 15, climatic changes 13, virus and nutrition each 11, and 3 frankly admitted that they did not know.

3) What treatment is most effective?

The sulfonamide drugs were most popular, being favorably mentioned 29 times. Antiserum was second with 15 exponents, and bacterins third on the list, with 10. Of 88 replies, 10 expressed the opinion that there is no effective treatment.

4) Have you found vaccination to be of value in preventing respiratory diseases?

Of the 48 replies, 22 believe there is great value in preventive vaccination; but the combined vote of the 14 reporting negative results, 5 who saw no change, and 7 who do not know, more than balances these.

5) Do you find respiratory diseases confined largely to any special aged animal?

Reports are pretty much in agreement. There were 27 who found it largely in calves, 14 in yearlings, and 5 in older animals. Age is not considered a factor by 11, and 6 did not know.

6) What is being done in the way of research in your territory?

Three provinces in Canada and only three states are known to be working on the problem, and it seems significant that all six reports are from an area of similar climatic conditions. Of 50 reports, 44 know of no research that is being carried on. Malignant catarrhal fever and pulmonary emphysema are being studied.

7) Has the disease occurred among calves nursing their mothers?

A surprisingly large number of responsible investigators have observed the condition in nursing calves.

8) Name the principal symptoms and pathological findings.

Nothing new is added by the replies. Dyspnea, high temperature, and pneumonia are prevalent; with cough, depression, diarrhea, and anorexia present in descending order of importance.

9) Has this any relationship to so-called flu in the human subject?

Additional research on this problem is sorely needed, since 26 replies said "Do not know," with 16 in the affirmative and 8 in the negative.

10) Do you feel flu to be an appropriate name for this disease until more definite information in regard to etiological factors has been established?

Opinion is sharply divided, with 24 emphatically opposed, 13 willing to accept the term, and 12 not prepared to express a view.

11) What is the effect of management, weaning, shipping, feedlots, open range, etc. upon the incidence of this disease?

Considering the disagreement on etiological factors, it is interesting to note the overwhelming agreement that the condition is brought about largely through mismanagement and

lowered resistance—the vote was 44 in favor of this view and only 8 dissenting.

12) Does this respiratory disease in calves spread from one farm to another, much the same as flu in swine, about the time beef calves are weaned?

Opinion was almost equally divided on this point, 21 believed that it does while 19 held the contrary to be true.

DISCUSSION

It came as a surprise to some of us that 12 eastern states and Canada had no information upon the condition so far as beef breeds were concerned. It is the opinion of some of us that nearly all calves pass through a respiratory infection at weaning time. Some show little evidence of being sick. They are hoarse from bawling. They are also off feed because of separation from their dams and from change of diet and environment. A certain number contract pneumonia, and out of that number, some die. One state estimated its loss from these factors at \$250,000 annually. It is also the opinion of some of us that nearly all calves passing through public stockyards suffer from respiratory infections, so-called shipping fever. It is odd that this information was not reflected in the answers to the questionnaire, since opinions varied greatly in regard to its incidence and seriousness.

Attention is called to the fact that the work of the Committee was to obtain general information, and that at no time did it pretend to conduct a thorough investigation or to seek a solution. The answers presented show a lack of agreement which points to an urgent need for fundamental research that will establish a sound basis of information from which some primary conclusions may be drawn.

Legislative Appropriations for Scientific Research

Offhand criticisms of Congress and state legislatures for failing to provide funds more liberally for scientific research seem to need reëxamination. The 79th Congress, for one example, did not pass the Neely-Pepper bill appropriating \$100 million for cancer research because (*Science*, Jan. 17, 1947) there was no accord among cancerologists as to how, where, and by whom the money was to be

used. Failure to provide funds for founding and maintaining a national research foundation was also attributed to the same cause—confusion of tongues among scientists, a condition which may never and, obviously, should never, be changed; for, when scientists agree, science may lose much of its momentum and thrills.

"Public Relations" and "Publicity" Misconstrued

In the councils of so-called learned professions, the terms "public relations" and "publicity" in the sense of promotional movements are losing their popularity. Although intended to pack altruism, they have the flair of selfishness. Anyway, they are misconstrued by the skeptical public and by large sections of the professions.

Speaking only for the veterinary profession, among too many individual members the misunderstanding of the subject is all but complete because a sharp line has never been drawn between the alleged and the actual reasons for improving public relations through publicity.

The thought that promotional projects are intended for *you* or *your profession* directly must be dispelled. The object is to promote the public relations of veterinary medicine, not of persons or groups of persons.

What cares the billion people of the busy occidental world for you or your small unit until convinced that domestic animals are indispensable to them, and that veterinary medicine, properly employed, is the limiting factor of their production? When that basic chore has been accomplished, there will be nothing for committees on public relations to do but to see that the practice of veterinary medicine remains competent.

Mechanical Wing Stripper.—A mechanical poultry-wing stripper strips the flight feathers of chicken wings at the rate of 600 to 800 an hour and of turkeys at about half that speed. The machine is distributed by the Engineered Product Company of Seattle, Wash.

Zoötherapy Canis.—Folks who stutter lose their hesitation when speaking to dogs. Association with dogs is excellent environment for lessening nervousness and emotional upsets.—*Judy of the Dog World.*

Veterinary Jurisprudence

W. H. SHANNON, V.M.D., LL.B.

Boston, Massachusetts

ALL OF THE LAWS governing the practice of veterinary medicine spring from three sources:

1) *Constitutional*.—Arising from the Constitution of the United States and of the several states.

2) *Common Law*.—Does not rest for its authority upon any expressed statutes but derives its force and authority from universal consent and immemorial usage, and is evidenced by the decisions of the courts of law, technically so-called in contradistinction to those of equity and the ecclesiastical courts. It prevails in England and most of the United States except when abrogated or modified by statute.

3) *Statutory*.—Created by or depending upon an express statute, and not upon equitable or common law rules; for example: the Harrison Narcotic Act; laws forbidding the docking of tails and cropping of ears; and laws regulating the license to practice.

VETERINARY LICENSURE AND PRACTICE LAWS

The person desirous of practicing veterinary medicine first meets the law arising from statutes, namely, when obtaining a license to practice in the state of his choice. Under these statutes, the preliminary requirements are usually clearly outlined; as to the professional requirements, the board of registration has more or less discretionary power in issuing the license. Therefore, since the powers conferred on these boards are discretionary, they cannot be delegated to others in the absence of distinct provisions of the statute. The legality of reciprocal licenses is open to grave question; in other words, a board of examiners in one state can not lawfully appoint the board in another state as its deputy to examine candidates.

The license gives only such rights and privileges as its wording shows; for ex-

ample, the license to practice veterinary medicine would not give the right to prescribe for a human being. Whenever the existence of a license is lawfully questioned, it is not sufficient to prove its possession by parol (word of mouth) evidence, nor is it sufficient to produce a certificate that a license has been granted. The license may be a forgery, or it may have been cancelled, or the certificate may be wholly false. By the general rules of evidence, the document itself should be produced.

The right to practice is a property right, but it is a right which is held subject to the doctrine that a person may so enjoy the use of his own property that it shall work no injury to another. This doctrine is the basis of police power. The courts recognize the fact that the right to practice is a valuable property right. However, the granting of a license does not operate as a surrender of police power on the part of the state. Therefore, a license once granted may be cancelled but, since the license is, in effect, a contract with the holder, terms under which it may be revoked should be clearly defined in the statutes.

Veterinarians can not form a company or corporation to carry on the practice of veterinary medicine because the license to practice is issued to individuals, not to any company or corporation. Partnerships, however, are permissible.

Prosecutions for violation of practice laws are customarily made by, or in the name of, the state licensing board but, from the nature of the case, the complaints must come from those who are cognizant of the facts; hence, a prosecution may be started by any citizen. The proper method is for the person having the needed information to send the facts to the state board having supervision of the matter.

THE DUTIES AND LIABILITIES OF A LICENSED VETERINARIAN

In the practice of veterinary medicine, one must remember that he assumes certain duties or liabilities. When the veterinarian answers a call and goes to see a

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Chief veterinary health officer, Division of Livestock Disease Control, Department of Agriculture, Boston, Mass.

sick animal, he enters into a contract with the owner. On his part, the veterinarian warrants:

1) That he is legally qualified to practice his profession.

2) That his educational training and experience enable him to treat the case in accord with the known facts of the science.

3) That he will continue in his care of the case and render such service as may be needed until the case shall be terminated either by death or recovery of the animal, or by the proper severing of the contract between the veterinarian and the owner.

4) That he will use approved methods of practice.

5) That he will use due care and diligence.

Unless especially provided, the veterinarian will not be deemed to have guaranteed a cure. [It is unethical to guarantee a cure. (AVMA Code of Ethics).—*Ed.*]

The owner or his agent agrees:

1) That he will follow all reasonable directions of the veterinarian, and render such assistance as may be possible.

2) That he will pay the veterinarian such reasonable fee as would be approved, considering the services rendered and the customs of the community.

Unless the veterinarian holds an official position, or his call to render professional service depends upon some previous contract or agreement, he is under no obligation to respond to a call.

When a veterinarian takes charge of a case, his employment continues while the sickness lasts, and the contract exists unless terminated by the assent of the parties or is revoked by the express dismissal of the veterinarian. If the veterinarian wishes to withdraw from the case, he should give reasonable notice to the owner so that another veterinarian may be obtained.

Gratuitous Service—The fact that a veterinarian has given one call free does not, in the absence of clear evidence to the contrary, presume to be the assumption of a contract in which he agrees to continue to give his service without compensation. But because he is giving his services free does not entitle the veterinarian to experiment at the expense of a poor person. If he is guilty of gross negligence, or a marked departure from ordinary practice, he will be held liable for any harm resulting.

Ordinary Liability—In the absence of a special contract, a veterinarian engages to use such a reasonable skill, diligence, and attention as may be ordinarily expected of persons in that profession. He does not

undertake to use the highest degree of skill nor an extraordinary amount of diligence. He must follow usual methods. He is not held liable for failure unless it is due to default in duty. The standard of skill must be judged according to the locality and the times.

It is a general rule that a veterinarian is not liable for a simple error of judgment. A greater degree of skill is demanded from the veterinarian who holds himself out as a specialist in a given field while he is working in that field. A veterinarian, called to treat a puncture wound in a locality in which tetanus is prevalent, and who does not give or recommend that tetanus antiserum be used, would be deemed to be guilty of negligence.

A duty rests on the veterinarian using biological products to use care in the selection of the same. Carelessness in the choice of these may be deemed negligence.

A veterinarian is not responsible for the acts of the owner or the owner's agent in dressing the wound of an animal he has operated upon unless he is negligent in permitting them to dress the wound. In a private hospital, the person dressing the wound or rendering nursing service would be the veterinarian's agent or servant, and the veterinarian would be liable for his acts. Even though the person dressing the wound is the agent of the owner, the veterinarian may properly be held for negligence if he fails to give proper instructions.

In a partnership, a partner can not be charged with the acts of his copartner if the latter goes outside of his legitimate scope or limit of the partnership by performing a wanton or willful act which the reasonable partner would not countenance or ratify. In a partnership, the members of the firm are jointly liable for the acts of omission and commission of the others within the terms of the partnership.

A veterinarian is liable for the acts of another veterinarian, sent by him to attend a case for him or under his direction, where the services of the second veterinarian are rendered as the outcome of relationship between the two veterinarians and not between the second veterinarian and the owner.

It is the duty of a veterinarian, after an operation, to give such additional care as the case may require to insure good results. An operation is not finished until

the patient has recovered from its performance. A payment of his fee at the time of the operation would not be considered as a release from liability unless such release were clearly indicated.

A veterinarian is liable if, in treating an animal, the owner or the owner's servant while assisting the veterinarian is injured or contracts a disease, if the veterinarian assures them there is no danger and they rely on his professional knowledge. If the assistant has been warned of the danger, he is held guilty of contributory negligence and the veterinarian would be freed from liability.

A veterinarian is liable if, through negligence, an infectious disease is conveyed to another patient.

A veterinarian is often called to destroy an animal injured as the result of an accident. He should be very careful to ascertain who is giving the order to destroy said animal. If the owner gives the order, the veterinarian is safe, but if it is the agent of the owner or agent of the other party in the accident, or a police officer, the veterinarian should ascertain for a certainty that said person has authority and is acting within the scope of his authority. The common law of humanity might justify putting the animal out of its misery, but, if the veterinarian is sued and at trial it is shown that the killing was unnecessary, the veterinarian might be held liable for the destruction of the animal. The veterinarian may know that the killing is justified, but he must be prepared to make proof of the fact which will convince the court in the face of conflicting testimony.

No man has a right to break the laws under which he is living; therefore, where a local law gives a body or an officer the authority to prevent cruelty to animals, and a man has been legally ordered not to work a horse, a veterinarian who advises the owner that the horse may be worked may thereby incur the penalty. That is a question of opinion with the veterinarian, but he has not the legal authority to decide the question of fact.

BAILMENT

Bailment arises when the personal property of one person is left temporarily in the charge of another. The person who leaves the property is the bailor, the person taking charge of the property is the bailee.

A veterinarian is a bailee when he assumes the care of a sick animal in a hospital.

Bailment is a contract, the terms of which may be expressed or implied, but there is always one definite term, namely, the bailee agrees to return the property bailed upon the proper demand of the bailor. The bailor may or may not be the owner. It is the duty of the bailee to return the property to the bailor.

If the bailment is gratuitous, the bailee is liable only for gross carelessness or negligence. If the bailment is for hire, the bailee is liable for ordinary care. Ordinary care means that amount of diligence which the ordinary man under ordinary circumstances would exercise with regard to his own property.

The bailor must exercise good faith towards the bailee by giving him notice of all the faults of the animal bailed, within his knowledge, that might result in exposing the bailee to danger, and if he fails to do so and by reason of it the bailee is injured, the bailor will be liable. For example, if a veterinarian is called to see an animal that is known to the owner to be vicious, it is the owner's duty to so inform the veterinarian.

When the bailee is being paid for the care of animals in the absence of a supplementary agreement, it is understood that he is expected to give them ordinary care and that he will not use them. Should he make use of them, he may be held liable for damages. This of course, would not apply to a milch cow, as proper care would require milking. A horse would need exercise.

A bailee can give no lawful title.

LIENS

When animals are left at a hospital, a receipt in duplicate should be made out for the animals and signed by both parties, with the terms agreed upon or the fixed charge, with the written understanding that a lien exists upon the animal until the bill is paid.

Possession is essential to a lien. A lien once released can not be renewed. An animal can not be held for a bill against another animal.

A lien may be created by common law, by statute, or by contract. As a general rule, it may be stated that a veterinarian has a lien on animals treated so long as

they are in his possession (Maine). This rule is not absolute and is open to question.

The lien itself does not give the right to sell. To preserve the lien, the veterinarian must continue to expend money in the keep of animals held. Sale is usually taken care of by statute. The general rule seems to be that, on mortgaged property, the lien has priority over the mortgage before foreclosure, and after foreclosure the lien would be supreme against the mortgagee as the new owner.

Liens once lost can not be revived. The writing of a notice simply to come and get animal held would break the lien, but a notice to come and get the animal and pay bill would not break the lien.

RIGHT TO SUE FOR COMPENSATION

A veterinarian has the right to sue for his compensation. An unregistered or nonlicensed veterinarian can not recover for services rendered. A promise to pay a person who is practicing illegally is void; the contract is void in its inception. By common law, a veterinarian who is guilty of negligence and malpractice can not recover for his services. Malpractice may be the result of negligence that is either willful or ignorant.

If the veterinarian is called by the owner or his agent, the owner is liable, but if called by a third party the owner would not be liable. When called by a third party, a special contract should be made with the third party. But if called by a third party and the owner accepts his services, either by permitting him to continue or by following his directions, or by getting a prescription filled, it will be considered that the owner thereby assumes the liability for the payment.

BILLS.

Bills or requests for payment should not be sent on postal cards. The bill should be in a sealed envelope. Even in a sealed envelope, there should be nothing which could be interpreted as a threat or an abuse. Violation of these points are an offense against the postal laws.

More Eggs.—When three feeders and three waterers were provided for each pen of 50 hens at the Oklahoma experiment station, 10 per cent more eggs were produced than when only one feeder and one waterer were allowed.

Veterinary Education Trades Horses in France

Trading horses in the middle of the stream is not always a bad idea; it may be the best time to drive a good bargain. Neither is war without its good points. It was France which set the example of having its veterinary education system administered by the Minister of Agriculture and its military veterinarians scattered loosely among the army without central command. As World War I brought a revolutionary change in the army veterinary service, so World War II revolutionized the civilian service. July 5, 1941, or about a year after Germany's occupation (*J. Off.*, July 8, 1941: 2855), higher agricultural and veterinary education were placed for administration under the national system of higher education. According to *Revue de Médecine Vétérinaire de Toulouse* (Aug.-Sept., 1946), "This law brought lively satisfaction to the profession; the members of the teaching staffs were put on the same footing as those of other departments of higher education. By virtue of this law and its modification of June 12, 1945, the veterinary colleges are schools of higher education lifted above the authority of the Minister of Agriculture."

Colleges Lose Scientists

Obviously on account of greater inducements than the colleges can afford to offer, there is an exodus of scientists to the industrial and governmental billets. Inasmuch as the college is the chief source of scientists, the trend is not wholesome. A scientist, to be qualified to weigh the "effects of his inventions and discoveries, must be educated far beyond the laboratory." World affairs justify concern over any downward trend in the teaching of science.—*Science News Letter*, March 15, 1947.

I believe that if the veterinarians of Illinois had been placed on their honor and permitted to use their best judgment, we, in Illinois, would now be many years ahead in our work of combating and eliminating some of the most complex problems in animal diseases, particularly brucellosis. — *Senator Simon E. Lantz, Aberdeen-Angus Journal*.

Historical Sketches and Memoirs

IV. Organized Veterinary Medicine

L. A. MERILLAT

Chicago, Illinois

To be ignorant of what occurred before our time is ever to remain in a state of childhood—Cicero.

The genetics of our professional societies is a fascinating chapter of modern veterinary medicine. Veterinary medical associations, as customarily named, do not date back to ancient times when livestock was the currency of the realm nor to the medieval period of ignorance, anarchy, and greed. The historian of the ages, with an eye on the subject of domestic animal diseases, comes upon the fourth decade of the nineteenth century, or about a hundred years ago, before finding the occasion to record the founding of a national veterinary society, notwithstanding that, during all of the period set apart as the Dark Ages, animal plagues raged unchecked to tragic ends more staggering in effect than the war catastrophes of the 1940's. The recession of ancient veterinary medicine began with the fall of Greece about 400 B.C., and continued until about 1500 A. D. In that period of nihilism, successive exacerbations and remissions of livestock plagues practically swept away the animal holdings of whole nations and left human affairs in the lurch and beyond current reclamation for centuries. Stressing the danger of exposing the world's pantry to the ravages of epizootic diseases is not a whim of the present time. (See, the life of Vegetius Renatus, Prince of Constantinople, 450-500 A.D.) For a discourse on veterinary medical associations, knowledge of "what occurred before our time" has to be kept uppermost in mind. The medieval veterinarians left an indelible record that they beseeched their government to prop up its shaky structure against the obvious ravage of animal diseases. But, since there was no professional society to impress upon the people's minds the man-animal relationship in human affairs, the unguided political setup slumped into lasting darkness on black death, rinderpest, sheep pox, foot-and-mouth disease, glanders, and anthrax—the same old morbid compound that is taking the AVMA to Cincinnati in Au-

gust, and nothing else but. In so far as veterinary medical associations are concerned, the Middle Ages are yesterday, today, and tomorrow, not a period to be so soon forgotten. So far as the most critical medical historians are able to determine, organisms—low and high—have been passed down to us, without material change of potential.

The genesis of veterinary association work is divisible into four periods of development, namely: the period of

- 1) clinical books,
- 2) formal education,
- 3) periodical literature, and
- 4) professional societies.

There is modern veterinary history condensed to four understandable terms, each of which was englobed by the next to constitute the going institution we call the veterinary profession.

1.

A veterinary literature was started following, and reportedly on account of, the terrifying animal plagues of the fourteenth and fifteenth centuries of our era and, currently, by a large group of self-educated practitioners (handy men), known in our jargon as nongraduates. These men have a legitimate origin, flourished all over the Western world before and after schools were founded, and never entirely vanished (but that is a topic for another thesis). Their books, revised with the developments of the medical sciences involved, led to formal veterinary education, blended themselves into the college curriculums, and are the vanguard of all clinical veterinary literature. That makes our clinical literature about 500 years old.

The clinical book period stands apart because books supplied the people with veterinary service in the absence of ample professional personnel until the middle of the eighteenth century in Europe and up to

the 1890's in North America. In the twentieth century, the character of this type of literature was gradually revolutionized. Instead of teaching medicine exclusively, as did the clinical work of Ruelius in Italy (1530), of Solleysel in France (1664), of Markham in England (1580-1625), of Dadd in Boston (1854) and James Law in New York (1870's), the present livestock and dog manuals major on breeding, feeding, and management, and to a lesser degree on diseases. The transformation was brought about by formal veterinary education, which takes the owners of sick animals to doctors instead of to books.

2.

Like the books which led to their founding, colleges in turn led to the publication of periodical literature—to the technical veterinary journals—and these in turn led to the organizing and the maintaining of the scientific societies. Graduate veterinarians were para-

Formal Education

Periodical Literature

doxically slow in demanding a stable periodical literature. France founded its first veterinary school in 1761 but did not publish a veterinary periodical until 1844, a lapse of *eighty-three years*. England founded its first school in 1791 and its first periodical in 1828, a lapse of *fifty-two years*. Canada started a veterinary school in 1862 and another in 1866 but did not publish a veterinary periodical until 1936, a lapse of *seventy-four years*.

In the United States, the faculty of the first veterinary college—Boston Veterinary Institute, started in 1854—published the *American Veterinary Journal* during the four years of its existence. The AVMA (then USVMA) began publishing the *American Veterinary Review* in 1877, a lapse of *twenty-two years* after the first college was started. Summed up, these facts show that the early faculties of veterinary medicine *per se* were remarkably sluggish in developing a periodical veterinary literature for the extension of graduate education beyond the classroom. The average lapse between the founding of colleges and journals was fifty-eight years in the four countries studied. The average age of dogmatic veterinary education for these countries is 130 years, during which there was no journalistic support for an

average of fifty-eight years. In fact, the fully animated veterinary profession, as of 1947, is only seventy-two years old—*younger than the chap who's hammering this out*. There's but one conclusion to draw: Veterinarians can read but don't.

3.

What's the connection of *books, schools, journals, and societies* to organized veterinary medicine—the title of this sketch?

Just this. These are the **Professional Societies** basic molecules of which the veterinary profession is composed. They originated in that order at given dates of modern times and independent of one another. While books and schools and journals and associations have not all been free of contaminants at all times, the four-square spirit of science and the high average of good intentions among men have so effectively removed the bad elements (influences) from all of them that the veterinary profession has won by merit a comfortable pew in the passing show. That has been, and shall continue to be, the chief function of the veterinary medical associations—a house-cleaning job without surcease.

The national societies which played important rôles in the development of veterinary medicine and their birthdates are:

*Société centrale de Médecine vétérinaire** of France—1844.

Royal College of Veterinary Surgeons of England—1844.

American Veterinary Medical Association† —1854.

National Veterinary Medical Association of Great Britain and Ireland—1889.

United States Livestock Sanitary Association —1897.

The national veterinary societies of other countries are omitted because data as to their origin is not found in my abridged *bibliothèque*.

The first local veterinary society of record was *Société Vétérinaire de la Manche*, organized at Caen, Normandy, in 1829. Several locals founded in Paris in the foi-

*Name changed to *Académie Vétérinaire de France* in 1923.

†Organized under the name of American Veterinary Association at Philadelphia in 1854; name changed to United States Veterinary Medical Association at the New York meeting of 1863; and to American Veterinary Medical Association at the meeting of 1898 in Omaha.

lowing years led to the national name above in 1844.

In the United States, the first state associations were those of Illinois and Michigan established in 1883, of New Jersey in 1884, of Pennsylvania, Ohio, and Iowa in 1885. During the following twenty years, nearly all of the states had their organized units. These were federated as constituent associations of the AVMA in 1933. The movement to establish state associations with the object of uniting them into a national was started by L. V. Plageman, M.R.C.V.S., of Brooklyn, and Thomas B. Daniels, V.S., of Chicago, who organized the short-lived National Veterinary Medical Association with the support of such prominent figures as A. H. Baker, principal of the Chicago Veterinary College; R. W. Finlay, veterinary editor of the *Spirit of the Times*, New York; T. Bent Cotton, prominent Ohio practitioner; Louis A. Greiner, Sr., V.S., of Indianapolis; and other leaders of local prominence. The constitutional objects of the National were (1) the organization of state associations and (2) the establishment of close coöperation with livestock and agricultural societies. At a convention held at the Sherman House, Chicago, in November, 1884, the members voted to disband on the ground that the reactionary faction of the USVMA (now AVMA) no longer opposed the idea of nation-wide expansion. In the early 1880's, capable veterinarians were scattered from coast to coast, yet the secretary's report of Sept. 20, 1881 (*Am. Vet. Rev.*, 5, Oct., 1881: 285-287), shows that the total USVMA membership was only 65. No study of organized veterinary medicine in the U.S.A. is worth much without keeping these events of the 1880's uppermost in mind, that is, the policies advocated by the NVMA which again turned the USVMA toward the original idea of nationalization, and which prompted Robert Jennings and Isaiah Michener to take the meeting to New York in 1863 for organization on a broader basis. From 1863 until the NVMA was formed twenty years later, the change of name and reorganization had the opposite effect. It made the national association a New York—Massachusetts local instead of the far-reaching body intended. Out west, Alexandre Liautard was censured for keeping the Association's affairs under his personal

wing and refusing to surrender any part of its operation to others. In short, in so far as the nationalization conceived by the Philadelphia founders was concerned, organized veterinary medicine in the United States lost two decades—a wartime and a postwar decade during which the country's animal-disease problems were of unusual importance, and the influence of the Association was nil.

If the USVMA accomplished anything at all from 1863 until 1884, historians would be delighted to include it in the records, to fill the gap in American veterinary history at a critical time when books and schools and journals and societies ought to have been making a lot of history. It was at the end of this do-nothing period that I came upon the drama that the veterinary profession was staging. The veterinary personnel of that period were then middle-aged men who did not hesitate to protest against the slow progress organized veterinary medicine had been making. With the approach of the 1890's, things began to pop. The low educational standards which Liautard and Baker and Hughes stubbornly refused to improve, because Andrew Smith wouldn't, were getting looked over by Huidekoper and Law and McKillip; practice laws and state associations to back their passage were lively questions. So the coming installment on Organized Veterinary Medicine will touch upon events within the memory of the living. I do not see how this bizarre installment could have been avoided. If anyone has any history of organized veterinary medicine in this country, during the do-nothing period, let's have it.

(To be continued)

The Oldest Veterinary Journals

Formal veterinary education was well under way before periodical literature was provided for continuous edification of the college graduates. The pioneers were:

- Recueil de Médecine Vétérinaire*, Paris, 1824.
- The *Veterinarian*, London, 1828.
- Vierteljahrsschrift für Wissenschaftliche, Veterinärkunde*, Vienna, 1851.
- American Veterinary Journal*, Boston, 1854.
- American Veterinary Review*, New York, 1877.

Of the five "firsts," only the *Recueil* (Paris) and the *Review* (now *J.A.V.M.A.*) survive.

SURGERY & OBSTETRICS

AND PROBLEMS OF BREEDING

Staphylococcic Abortion in Cattle

W. D. POUNDEN, D.V.M., M.S., and W. E. KRAUSS, Ph.D.

Wooster, Ohio

THE PAUCITY of data in veterinary literature referring to staphylococci as etiologic agents of abortion in dairy cattle prompted this report concerning two such cases. Various staphylococci were obtained by Beaver, Boyd, and Fitch¹ from the genitalia of infertile cattle. They did not consider them as the primary cause of the pathologic condition, nor did they indicate whether these organisms might have produced the abortion in those cases in which abortion preceded the sterility. Gilman² remarked that only isolated cases of abortion are caused by staphylococci. He referred to but one specific instance, a case that had been reported by Carpenter, in which *Staphylococcus albus* was incriminated in association with a mold.

Case 1.—The subject was a 4-year-old cow that had freshened normally on Aug. 31, 1945. She had reconceived on Jan. 21, 1946, to artificial insemination using egg-yolk-buffer mediums for the diluent and with placement of the semen in the uterus immediately anterior to the cervix. She aborted a dead but not visibly decomposed fetus on Aug. 29, 1946. The expulsion was accompanied by approximately 8 liters of light, grayish tan-colored pus tinged with pink and of curdy consistency. Normal amniotic and allantoic fluids were not visibly present, being apparently displaced by the pus. The placenta was partly retained, and examination of cotyledons in the fresh state revealed necrotic areas on their attachment surfaces, which gave them a red and gray mottled appearance. Gram-positive cocci were observed in massive numbers in stained smears made from the uterine exudate. A *Staphylococcus* resembling *Sta. albus* was recovered in pure culture from the uterine exudate of the cow, and from the lungs, heart, and fourth stomach of the fetus.

Case 2.—This 5-year-old cow had failed to reconceive until Feb. 16, 1946, following a normal freshening on Feb. 28, 1945. The same sire and technique were used to obtain this conception as were used in case 1. She aborted a small, live calf on Oct. 5, 1946. Approxi-

mately 4 to 6 liters of pus similar to that described for case 1 accompanied by mucus and fluids of normal appearance were passed at this time. As in case 1, the placenta was retained, the cotyledonary surfaces were necrosed, or partly so, and great numbers of gram-positive cocci were observed in direct smears made from the uterine exudate. A *Staphylococcus* similar to that obtained from the uterus and fetus of the first case was recovered from the abnormal uterine exudate. The organism was not obtained from any of the internal organs of the calf.

Both animals had well-developed udders containing normal colostrum when they aborted. Toxemia or other marked indications of systemic reactions were completely lacking. They came into production without delay and each cow has given approximately 50 lb. of milk per day. Involution of their uteri proceeded in almost normal manner with speedy cessation of discharges following conservative treatment.

DISCUSSION

While the conclusion would not be justified that the technique used in artificially inseminating these cows influenced the outcome, that possibility does exist. It is also possible that the changed conditions resulting from wide use of the technique of deep penetration of the genital organs for artificial insemination purposes may introduce pathogens which previously were observed infrequently, and they may assume greater importance.

SUMMARY

Two case histories of abortion in late pregnancy in dairy cows are described. Considerable quantities of uterine exudates consisting of light, grayish tan-colored pus tinged with pink and of curdy consistency accompanied these abortions. Gram-positive cocci in great numbers were observed in direct smears made from these exudates. A coccus resembling *Staphylococcus albus*

was recovered from the exudates and the internal organs of 1 calf.

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²Gilman, H. L.: Some Causes of Abortion in Cattle Free from Bang's Disease. *Cornell Vet.*, 29, (1939): 153.

Inguinal Hernia Involving the Uterus

A 6-year-old Spitz bitch presented at the clinic had two large swellings, of ten months' duration, in the groin. The dog seemed normal despite the presence of the swellings, but the owner had noticed that they had grown rapidly in the preceding month.

Palpation revealed inguinal hernias; however, it was impossible to determine definitely whether any internal organs were protruding. Fluoroscopy, after a meal of barium sulfate, showed the intestines in normal position.

The following day, an operation was performed under ether. The skin incision on the right side revealed that the body and the larger part of both cornua of the uterus were herniated. They were replaced, and adhesions around the ring broken down. The ring was closed with a continuous No. 0 catgut suture and the skin approximated with interrupted nylon sutures. The incision on the left side revealed that the content was only omentum. It was treated in the same manner.

The skin sutures were removed in five days, and the patient was discharged.—*Virginia M. Streets, D. V. M., Pullman, Wash.*

Fractured Incisors of a Horse

I was called to treat a 26-month-old Thoroughbred that had his central, lateral, and corner incisors of one side knocked out. The question arose as to whether permanent incisors will grow in. I presumed they would grow in but a horseman on the scene swore up and down that they would not. Please let me have your expert opinion on this matter.—*E. B. McCormick, D.V.M., Big Horn, Wyoming.*

Reply.—The permanent teeth will erupt at the usual time, namely: The central pair at 30 to 36 months, the lateral at 44 to 48 months, and the corner at 55 to 60

months. The central pair at 26 months are long, well-formed teeth, but the others are still quite embryonic. Granted that the maxilla was not badly shattered, the sequence will not be altered.—*ED.*

Pregnancy Diagnosis in Cows

Reproductive problems in cattle drew a big share of interest at the first Kansas State College (Manhattan) post-graduate course for veterinarians in April. Included was the following guide to the diagnosis of pregnancy in cows, presented by Dr. George R. Moore of the veterinary faculty:

In a thirty-day pregnancy, the uterus is slightly enlarged. The uterine artery cannot be detected and cotyledons cannot be palpated. The ovary contains the corpus luteum, but the fetus measures only about 2/5 of an inch.

In sixty to ninety days, the gravid uterine horn is 3 to 5 in. in diameter, and the non-gravid horn is about 2 in. There is an increased pulse, on the gravid side, of the uterine artery. The cotyledons can be felt, and the fetus measures about 4 1/2 in.

In 120 to 150 days, the fetus can be felt. The uterine artery on the gravid side has a prolonged soft beat and is about 3/4 of an inch in diameter; the fetus is about 14 in.

After 180 days, the fetus is large and can be palpated readily, and at 200 to 210 days, it is completely haired out.

The corpus luteum of pregnancy is always in the ovary on the side corresponding to the pregnant horn. It grows larger and rounder and sinks deeper into the ovary as pregnancy advances up to 120 days, then remains constant until parturition. There is a considerable amount of follicular activity during the first two or three months of pregnancy.

Lactation Failure in Sows.—Lactation failure has caused the loss of many fine litters. About the only thing that I have found to stimulate milk flow is anterior pituitary extract, two or three small doses intramuscularly.—*Dr. J. C. Kaiser, Rockwell, Iowa, in Iowa Vet.*

Professor C. P. Thompson, of Oklahoma A. & M. College, in an article titled "Feeding the Brood Sow," reminds the readers of *Hog Breeder* that "50 per cent of the pigs farrowed never reach the pork barrel," and that the first few days of a pig's life are the hardest.

Photosynthesis is the process by which nature maintains all life on earth.

Improved Intravenous Anesthesia for Small Animals

ELLIS P. LEONARD, B.S., D.V.M.

Summit, New Jersey

IF ONE were to submit for casual inspection a list of drugs available for anesthesia, it could be assumed that the small animal surgeon is blessed with a wide choice. Nevertheless, it should be borne in mind that, because an anesthetic is available and has been used with success on human beings or even on large animals, it is not necessarily a safe or practical drug to use on canine patients. In selecting an anesthetic, the first consideration should be its safety and its ability to abolish pain. Sometimes these two characteristics are sufficient, but often in canine practice it is equally important to select a drug that will allay anxiety and excitement, insure control, and reduce resistance.

At this point, the surgeon must choose between a local and a general anesthetic. Local anesthetics applied by contact, infiltration, or nerve block are highly successful in man and large animals, but this is not altogether true in small animals. Although pain may be entirely annulled, many dogs and most cats will be apprehensive and at times difficult to control. Such conditions limit surgery and endanger asepsis. The use of such anesthetics is strictly limited in canine surgery to selected cases.

In major surgery, where the ultimate recovery of the patient depends to a large degree on the asepsis and undivided attention of the operator, drugs producing general anesthesia are chosen. This is also true in most orthopedic surgery and operations on the head, ears, eyes, and mouth. Anxiety and apprehension are eliminated, convenient positioning is afforded the surgeon, and asepsis is enhanced.

Two types of general anesthetics are popular in small animal surgery: the inhalants and the intravenous injections. Ether, for example, requires a trained anesthetist or at least better than the average help, a luxury few practitioners can provide. We have overcome this difficulty to a certain degree by using a Ben Morgan unit for administering ether. In many cases, ether must be administered by some inexperienced person or by a circus-like performance of the surgeon. When used under such conditions, it probably causes as many deaths as any other somnifacient. Properly used, it has a wide margin of safety and

has a very definite place in small animal surgery. Ether is the anesthetic of choice in gastrohysterotomy.

The main intravenous anesthetics today are pentobarbital and pentothal sodium. They are used with gratifying results. True, they have a narrow margin of safety and require experience in administering, but they can be given at a time when the operator is free to focus his whole attention on the anesthesia, a distinct advantage when the attendant has had but little experience.

A definite plan should always be followed when using pentobarbital sodium:

- 1) Insert the needle well into the vein. Nembutal, subcutaneously, gives latent anesthesia and may cause an embarrassing slough. If uncertain as to the location of the needle, try another vein. There are eight accessible veins for this purpose.

- 2) Administer slowly. Take five minutes or more if necessary. The time required for maximum effect is variable. Great caution should be observed in animals that show excitement near the end of the preanesthetic stage. Usually, these patients pass into the anesthetic stage within two minutes if half the estimated dose has already been given.

- 3) Watch the pupillary reaction, the corneal reflex, and the pedal reflex. At the outset of the preanesthetic stage, the pupils dilate widely and as the injection proceeds there is a gradual constriction. A pin-point pupil indicates the end of the preanesthetic and the beginning of the anesthetic stage. It is not unusual for the patient to yawn at this stage. As the depth increases to surgical anesthesia, the corneal reflex gradually fades and is followed closely by the pedal reflex.

If a planned routine so outlined is followed there need be no concern about the dose. Too much emphasis has been placed on dosage according to the patient's weight. Old, obese subjects may require far less and young, vigorous, or high strung ones slightly more than the recommended 1:5 ratio. This is especially true in cats. Weight should be used only to approximate the dose.

Morphine has been commonly used as a basal anesthetic for nembutal. It was thought that safety was thereby increased. Swingle, Kleinberg, and Hays¹ found that morphine preceding nembutal added to the hazard. In respect to blood pressure in 96 dogs, they found the average normal pressure of 128 mm Hg. fell to an average of 108 mm Hg. in ten to fifteen minutes and,

when followed with injections of pentobarbital sodium, the pressure dropped as low as 76 mm Hg. Nembutal alone raises blood pressure slightly. The depressing effect of morphine used in conjunction with ether has been reported by Parkins.² Green, Nickerson, Lewis, and Brofman³ have also reported low blood pressures in dogs anesthetized with morphine and pentobarbital sodium.

We began, about ten years ago, to search for some method of improving the action of nembutal on the cardiac and respiratory centers without interfering with its anesthetic action. The margin of safety seemed to be its most objectionable feature. We were rewarded by the report by J. S. Lundy,⁴ stating that 1 cc. of coramine to each Gm. of pentothal sodium given intravenously to human patients had been successful in 1,395 cases.

Coramine* has been used in human medicine for twenty years. Nearly 1,900 articles have been published about it. It is chemically pyridine beta carboxylic acid diethylamide or $C_5H_4NCO(C_2H_5)_2$. It is usually given intravenously or intramuscularly in a 25 per cent aqueous solution and has been widely used as a respiratory and circulatory stimulant. Its most striking action is stimulation of respiration.

After experimenting with various concentrations, we found that it could be used to advantage in dogs if mixed at the rate of 1 cc. of coramine to each 8 gr. of nembutal or as concentrated as 1 cc. to each 4 gr. The coramine is aspirated directly into the syringe containing the nembutal, and the two are thoroughly mixed by rotating the syringe. Anesthesia is carried out in the usual manner. It was noted that when surgical anesthesia had been obtained the respiratory rate was about twice that observed in straight nembutal anesthesia, and that the heart rate was slightly increased and the pulse was strong and steady. At the same time, there was no response to outside stimuli. Since 1936, we have used this combination when there was any doubt as to the stability of the patient either because of age or debility. Although no record was kept other than the regular surgical record, we feel that the low mortality in these cases indicates a safe type of

anesthesia (98.3% recoveries in 2,710 cases).

A complete record was then kept for two years on all cases of this type of anesthetic. During this period, we gave it as rigid a test as possible, using it only in cases which we felt could not survive straight nembutal. Among these were 40 critical cases with 1 fatality. Examples of the type of cases follow.

Case 1.—A female smooth Fox Terrier weighing 21 lb. with a valvular insufficiency suffered with pyometra. This animal was weak and dehydrated. As preparatory medication, she was given 300 cc. of 5 per cent glucose in normal saline intravenously on two occasions. The anesthetic in this case was 3 cc. of a 1:3 coramine-nembutal mixture.

Case 2.—A 12-year-old male Airedale weighing 60 lb. required an enterotomy to relieve an intestinal obstruction. Anesthetic consisted of 7 cc. of a 1:12 coramine-nembutal mixture. A notation made on the case record was "perfect surgical anesthesia."

Case 3.—A 10-year-old male German Shepherd weighing 50 lb., with cystic calculi and a severe cystitis, showed signs of uremia. An 11.5-cc. injection of a 1:7.5 coramine-nembutal mixture was necessary to produce proper anesthesia.

Case 4.—A 12-year-old female mongrel weighing 27 lb., with an abdominal tumor, was relieved of a 9.25-lb. tumor involving the spleen. A 3.4-cc. injection of a 1:5 coramine-nembutal mixture was used.

SUMMARY

Two surprising facts were shown in this series for which we can find no logical explanation: (1) While anesthesia was sufficiently deep, the amount of nembutal required was exceptionally small in most cases. (2) Stimulation of the patient seemed to be confined to the circulatory and respiratory apparatus.

Naturally, the evidence presented is purely of a clinical nature, and one would not expect to maintain such a low mortality if the number of cases were increased. This type of intravenous anesthesia has been a decided help with our surgical cases.

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*Coramine for these observations was supplied by Ciba Pharmaceutical Products, Inc., Summit, N. J.

Adenocarcinoma of the Frontal Sinuses (?) Canine

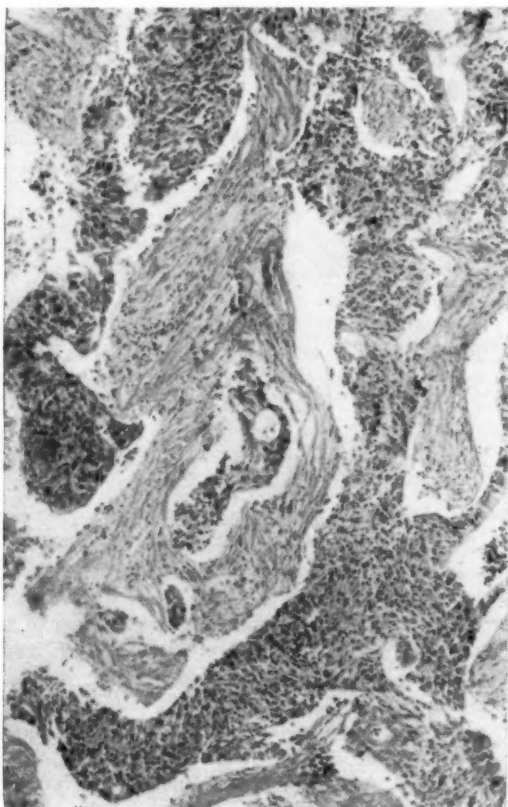
MATTHEW A. TROY, D.V.M.

North Pelham, New York

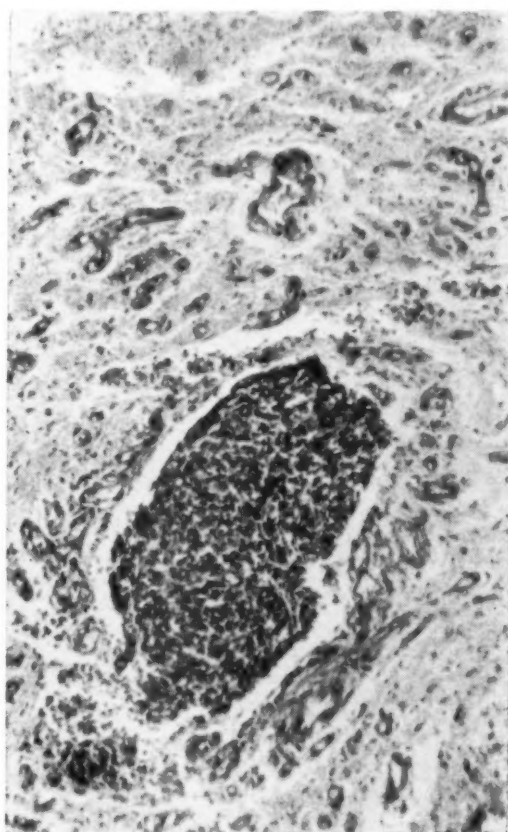
MILKS and Olafson¹ reported on ten primary brain tumors in dogs and included one secondary neoplasm of the brain in their paper. They suspected brain tumors to be of common occurrence but infrequently reported.

The following report deals with an

years old was examined on Sept. 14, 1946. The owner stated that for about two weeks the dog had been so cross that he would snap at the least provocation. The dog had frequent spells of panting, lack of vigor, and partial loss of vision. Above and behind his right eye was a swelling



—Neg. No. 98271, Army Institute of Pathology.
Fig. 1—Adenocarcinoma of the frontal sinuses (?) of a dog. The tumor consisted of epithelial cells arranged in masses, divided, and supported by a collagenous stroma. Acini formation is present. x 105.



—Neg. No. 98300, Army Institute of Pathology.
Fig. 2—Formation of acini by tumor cells. x 130.

adenocarcinoma which possibly originated in the frontal sinus and had secondary growths in the brain.

A male, tan, Cocker Spaniel about 8

about 5 cm. in diameter, which was thought to be of recent origin and possibly due to a scratch from a cat.

The dog vigorously resisted examination. The temperature and heart sounds were normal, the pulse weak and thready, and the respirations accelerated and shallow. The mass over the eye was hard and not

¹Milks, H. J., and Olafson, Peter: Primary Brain Tumors in Small Animals. *Cornell Vet.*, 26, (1936): 159.

painful to the touch. No evidence of trauma was visible.

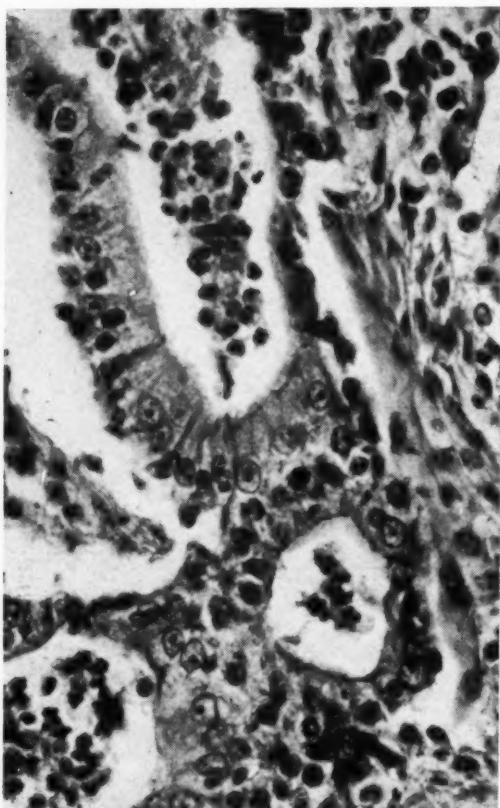
A diagnosis of tumor involving the brain or skull was made. In spite of an unfavorable prognosis, symptomatic treatment was started at the owner's request. Nine days later, he reported that the medicine relieved the symptoms, but the general condition was getting worse. Treatment was continued.

Euthanasia was performed on Sept. 25, 1946. At that time, the dog was very weak, and he appeared to be totally blind. In trying to get up, he would sink down

and temporal muscles. The tumor mass erodes the frontal and part of the parietal bones on the anterior aspect of the cranium. One small mass is intimately attached to the dura and measures 1.5 by 1 by 1.8 cm. The right hemisphere of the brain is compressed from right lateral and anterior approach.

The tumor invades the adjacent muscles, dura, and the brain itself. Many lymphocytes and neutrophils are seen in the meninges at many points. No significant lesions are seen in eyes or optic nerves.

Comment.—The exact origin of the neoplasm is not obvious. We suspect that it arose from the epithelium of the respiratory tract or the perinasal sinuses. We are coding this case as adenocarcinoma of the frontal sinuses(?) canine.



—Neg. No. 98273, Army Institute of Pathology.
Fig. 3—Invasion of brain by tumor. x 500.

on the hocks. Palpation of the frontal and parietal bones just above the eyes caused crepitation. The tumor did not appear to have increased in size in two weeks.

Part of the skull, the brain, the tumor, and the eyes were sent to the Army Institute of Pathology for diagnosis. A part of their report follows:

A tumor mass 2 by 4.5 by 5 cm. is intimately attached to the scutularia, anterior auricular,

Sex Determination

Among the theories for sex determination is one advanced by Dawson, i.e., that in any individual female one ovary matures only male-producing ova while the other matures only female-producing ova. Refuting this theory, Lovegrove writes in the *British Medical Journal* (Nov. 9, 1946): "In June, 1938, I performed a laparotomy on a woman in whom I found an abdomen full of blood. The right ovary was split almost in half, presumably due to a ruptured Graafian follicle. The most satisfactory way to control the bleeding was to remove the ovary, and I did so. This woman has since had three children—two boys and one girl."

The Liver—Its Relation to Anaphylaxis

The liver is the most important organ in the production of the symptoms of anaphylactic shock in the dog, according to Graña (*Ann. Surg.*, 4, (1946) : 261-267). It is largely responsible for the fall of blood pressure, although other organs also may participate in this reaction. The liver of the dog appears to be responsible chiefly for the liberation of heparin. It may be equally responsible for the increase in blood histamine, since this organ loses large amounts of histamine during shock.

The advisability of placing sulfonamide powder or other material in a wound before closure should be considered carefully. Experience has shown that in a properly prepared wound, such a practice is unnecessary.—Dr. W. W. Armistead in *North American Veterinarian*.

Extensive Thoraco-Abdominal Wound

R. D. RADELEFF, D.V.M.

Kerrville, Texas

DISCUSSIONS of perforating wounds of the chest and abdomen are common, but those of simultaneous perforations of these cavities have not been plentiful. This case is presented to bring attention to the possibilities offered by penicillin and sulfanilamide in the control of impending infection of the pleural and peritoneal cavities. Extensive, accidental wounds perforating either cavity in the horse have been considered almost certainly fatal.

The subject, a Quarter Horse mare, 6 years old, was being used to corral an

tore the aponeurosis of the external abdominal oblique and the fibers of the internal abdominal oblique at the ventral border of the paralumbar fossa. The bull, after penetrating the abdomen with his horn, apparently shook his head vigorously, thereby severely tearing the two abdominal muscles.

The mare was seen about five hours after the accident. At this time, she showed severe pain and uneasiness. The temperature was 102 F., pulse 68, respiration 20 and shallow.

The protruding omentum was severed at the point of its emergence from the chest wall. After controlling the hemorrhage, the stump was dusted freely with sterile sulfanilamide powder and returned to the abdominal cavity. To do this, the stump had to be returned through the lung and diaphragm, which proved to be a ticklish procedure. The diaphragm was sutured with double No. 2 catgut. The suturing was strictly by instrument touch to prevent extensive pneumothorax. Partial pneumothorax was deliberately induced to facilitate rapid healing of the torn lung. The

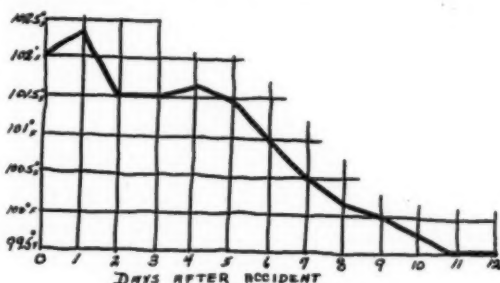


Chart 1—Temperature of the mare.

adult Brahma (Zebu) bull. While in the process, the bull charged horse and rider unexpectedly, catching the mare broadside before she could be turned away. The bull's horns were approximately 18 in. long and 4 in. in diameter at the base. The left horn entered the mare's chest on the near side between the sixth and seventh ribs at a point about 2 in. above the ventral margin of the serratus ventralis, traveling in a postero-medial direction to pierce, in turn, the pleura, lung, and diaphragm, entering several inches into the abdominal cavity. The omentum adhered to the scaly surface of the horn and was withdrawn with it. The forced spreading of the ribs by this violent blow ruptured the intercostal muscles between the two ribs for a distance of some 12 in. Approximately 18 in. of omentum protruded from the skin opening.

The right horn penetrated the skin just posterior and about 6 in. ventral to the tuber coxa, traveled antero-medially and



Fig. 1—The wounds one week after treatment.

pleura and chest wall were closed by continuous gut suture. Each successive layer was dusted lightly with sulfanilamide. The skin was closed with a combination of interrupted and continuous nylon sutures, leaving a small opening at the lowest point for anticipated drainage.

The skin wound of the abdomen was enlarged in order to study the damage done to the abdominal wall. This incision, about 6 in. long, was made from the dorsal border of the tear forward and upward, slightly anterior to the tuber coxa. The abdominal cavity was carefully checked for fragments, and 1 oz. of powdered sulfanilamide was scattered over the abdominal organs. The fragments of the peritoneum were brought together and sutured with No. 2 catgut. It was obviously impossible to obtain complete closure of the opening left by the severed muscles, so something akin to plastic surgery was done. The tensor fascia lata, lying slightly posterior and lateral to the opening, was split and a segment used to cover the opening, suturing first the posterior margin of the abdominal opening and proceeding anteriorly. Powdered sulfanilamide was dusted very lightly between all margins. The skin was sutured in the same manner as the thoracic wound.

Each wound was then dressed with a sulfanilamide-urea ointment. A "cradle" was placed on the mare's neck to prevent gnawing of the sutures. Three thousand units of tetanus antitoxin were given subcutaneously, and 250,000 units of penicillin sodium in normal saline were given intravenously. Two hours later, 200,000 units of penicillin in oil were given intramuscularly. The latter dose was repeated daily for eight days. The best indication of the activity of the penicillin and sulfanilamide is given in the accompanying temperature chart.

Extensive phlegmonous areas along the sternum and ventral abdomen developed on the third day and persisted through the tenth day, without suppuration. Only slight swelling around the injured areas was apparent. On the sixteenth day, a small pocket of sterile discharge developed at the lower end of the thigh wound, necessitating drainage. Recovery was actually uneventful, similar to what might have been expected from extensive surgery.

Several important observations may be made from the course of this case. The most obvious is that extensive simultaneous penetration by foreign objects of the thoracic and abdominal cavities of the horse need not be fatal if carefully attended. The almost complete lack of drainage from these wounds and temperature curve indicate the degree of control that sulfanila-

mide and penicillin gave over impending wound infection. This control is well known in ordinary wound treatment, but its value is much greater in caring for extensive wounds.

The use of an adjacent muscle of the thigh as a permanent cover for the abdomen has not, to my knowledge, been reported. The satisfactory results obtained in this case should merit application in similar cases.

The surgeon who overlooks his patient's nutritional state may be in for a headache.

A 30 per cent loss in blood volume usually leads to death.

Anemia due to loss of blood should be corrected by whole blood transfusion.

Wound healing is delayed when a marked ascorbic acid deficiency exists.

Infection and delayed healing of wounds may indicate carelessness in selecting and applying surgical dressings.

Rayon is reported to be an excellent material for dressings used in immediate contact with surface wounds.

Thrombin should be used in conjunction with gelatin sponges to obtain the maximum hemostatic effect, according to studies at the University of Chicago.

Protein hydrolysate solution, administered parenterally, will adjust the body nitrogen balance when protein cannot be given orally.

Chlorophyll possesses value as a wound deodorant; in fact it is superior to penicillin for this purpose, according to Army tests. Moreover, it appears to promote healing.

Benadryl. — Is it clinically an antihistamine drug, or is it simply a depressant? When the answer is learned, the usefulness of the drug as adjuvant treatment can be determined.

CLINICAL DATA

Clinical Notes

Dogs may have tuberculosis without showing typical symptoms.

There are as many atoms in a red blood cell as there are blood cells in the human body—about 10 trillion.—*Sci. Digest.*

Avian tubercle bacilli are probably present in about 1 per cent of the eggs laid by infected chickens.—*Dr. Wm. H. Feldman, Rochester, Minn.*

In the treatment of lactation tetany cases, most of which exhibit hypocalcemia and hypomagnesemia, the factor of hyperexcitability must be considered.

Abscesses appearing after intravenous or subcutaneous injections may indicate that the temperature of the substance injected was either too high or too low.

Chickens should not be used for virulence tests for acid-fast bacilli unless they have failed to react to an intracutaneous injection of avian tuberculin.—*Dr. Wm. H. Feldman, Rochester, Minn.*

Mites Harbor Encephalomyelitis Virus.—University of California scientists found (*Science*, Apr. 18, 1947) that mites on wild birds, such as yellow-headed blackbirds and English sparrows, can harbor the virus of equine encephalomyelitis.

Methylene Blue in Virus Diseases.—"In view of the well-established function of methylene blue as a catalyst of numerous enzyme reactions and as a carrier of oxygen, studies of the action of this drug in . . . virus infections may well be of considerable interest."—*From an editorial in Brit. Med. J., Apr. 12, 1947.*

Livestock acquire anthrax most often through infected feed.—*Dr. C. D. Stein, Washington, D. C.*

Anthrax spores may retain their viability in soil, water, and on hides for more than twenty years.

Newcastle disease has made a sweeping reappearance in England and Wales, after a thirteen-year absence. (*See News Section (foreign), this issue.*)

The organism of avian tuberculosis will remain viable and pathogenic for several years in the litter and soil of an infected barnyard.

A strain of rabies virus isolated from the salivary glands of vampire bats captured in Mexico was found to be antigenically related to the Pasteur strain of rabies virus.

In states where hog raising is a major farm industry, the incidence of brucellosis in many large droves is 20 to 50 per cent.—*Dr. I. Forest Huddleson, East Lansing, Mich.*

Since Kelser's discovery (1933) of mosquito transmission of equine encephalomyelitis, more than a dozen species of mosquitoes have been found capable of conveying this disease.

Pullorum Disease.—If flocks were first tested when in 25 per cent or more production, then retested until two clean tests were obtained at thirty-day intervals, we would have very little pullorum disease.—*Dr. P. V. Neuzil, Blairstown, Iowa.*

Treatment of Bovine Anthrax with Penicillin

C. W. RIGGS, A.B., D.V.M., and A. C. TEW, D.V.M.

Yuba City, California

LOSSES from anthrax in beef and dairy cattle occurred in Yuba and Sutter counties in California in 1945 and 1946. No diagnosis of anthrax had been made in this region for ten years or more. Twenty-five miles west is an established virulent anthrax area and it is possible that the current epizootic was introduced by sheep passing through from the infected area, or

a temperature elevation were treated. Some of the treated animals were showing weakness, suppression of milk flow, hyperemia of visible membranes, and anorexia at the time of treatment. Some were hypersensitive, and others were apparently normal except for the temperature; the minimum abnormal temperature was 104 F., and some individuals registered 109 F. Herds which had been previously vaccinated but were experiencing losses were examined as to temperature; sick animals were treated and normal animals given special No. 4 spore vaccine subcutaneously and 50 cc. of antiserum.

Because serum, in doses of 200 to 500 cc., was expensive and not entirely effective, other methods of treatment were tried. Penicillin alone, and in conjunction with anthrax antiserum, was employed with gratifying results. The speed and effectiveness of the minimal doses of penicillin employed were surprising. Repeated trials in several herds under varying conditions

TABLE 1—Treatment of Cattle for Anthrax, with Serum, Serum and Penicillin, and Penicillin Alone

Treatment	Treated No.	Deaths No.
200-500 cc. serum alone, intramuscularly	14	8
200 cc. serum and 2 injections of 100,000 u. penicillin 12 hr. apart.....	25	1
200 cc. serum and 3 doses 100,000 u. penicillin, 12 hr. apart.....	8	0
3 injections of 100,000 u. penicillin 10-12 hr. apart. No serum.....	44	2*

*One animal down at time of treatment. 22 of this group vaccinated 6 mo. prior. Both losses in vaccinated animals.

by dormant spores seeded in local pastures. First losses occurred in late August, after a hot, dry summer preceded by an unusually wet winter, in a herd previously virgin to anthrax, which the owner had vaccinated five days before with a No. 4 spore vaccine alone. Simultaneously, losses occurred in herds 15 miles distant which had never been vaccinated. Most deaths, observed without taking temperatures, were peracute. Temperatures of all animals in herds having losses revealed varying numbers of animals carrying temperatures 2 to 5 F. above the herd average.

Prophylactic measures in noninfected herds consisted of vaccination with a No. 2 intradermal spore vaccine given simultaneously with 50 cc. of bovine anthrax antiserum. In infected herds, the temperature of each animal was taken. Those apparently normal were given No. 2 spore vaccine and antiserum, and those showing

TABLE 2—Response of Elevated Temperatures to Penicillin in Anthrax-Infected Animals

Treatment: 3 injections of 100,000 units penicillin in water, 10-12 hr. apart.

Herd 1 (dairy)—Not previously vaccinated.			
Temp. at 1st inject.	Temp. 24 hr. later (after 2 inject.)	Temp. 48 hr. later (after 3 inject.)	
107.0	103.5	102.0	
106.5	102.0	101.5	
107.0	101.5	101.5	
104.5	101.5	101.5	
106.0	103.2	102.0	
106.0	104.0	102.0	
108.0	103.5	102.5	
106.2	106.0	104.0	
107.0	105.0	103.0	
107.0	105.0	101.5	
Herd 2 (beef)—Vaccinated 6 mo. prior intradermal No. 2 spore.			
107.5	103.0		
108.0	103.0		
107.7	103.5		
106.0	102.0		not observed
105.4	103.0		
105.0	103.5		
105.0	101.8		

Note: No losses occurred in the herd.

From the Yuba Sutter Veterinary Hospital, Yuba City, Calif.

were consistently effective in stopping losses.

In all herds where penicillin was employed, there had been one or more deaths from anthrax previous to examination and treatment. Samples from four herds were submitted to the State Department of Agriculture laboratory and the diagnosis confirmed. Methods of treatment and dosages are summarized in table 1. Penicillin was given in doses of 100,000 Oxford units in sterile saline solution, with 200 cc. of anti-serum. Another 100,000-unit dose was given ten to twelve hours later. Of 25 animals so treated, 24 showed complete recovery and 1 died before the second injection of penicillin. Symptoms, other than rise of temperature, were observed in 12 of the animals prior to treatment. Convalescence was characterized in most animals by stiffness and apparent muscular soreness. Four animals developed edema of the brisket and 3 showed swellings at the sites of serum injection. Eight animals were given 200 cc. of serum and three doses of 100,000 units of penicillin twelve hours apart, and all survived.

Because results with serum and penicillin were so much better than with serum alone, we arranged with one beef-herd owner to try treatment of 16 adult Hereford cows and steers (temperatures of 105 to 109 F.) with two injections of 100,000 units of penicillin in saline ten hours apart. Of these animals, 15 recovered. None had been vaccinated previously. Subsequent trials of penicillin alone, using three injections of 100,000 units twelve hours apart resulted in losses of 1 out of a group of 5, 1 out of 7, and none out of 32 animals in divided herds.

Responses of elevated temperatures in infected animals are shown in table 2. Herd 1 had never been vaccinated and 3 animals had died of anthrax before treatment was initiated. There were no losses in the 10 animals given three penicillin injections. Herd 2 had been vaccinated with No. 2 intradermal spore vaccine six months prior to losses. Two deaths occurred before treatment, and none of the 7 treated animals died. Infection was probably due to fly-bite inoculation from a nearby anthrax carcass.

From the results obtained in the two counties over a two-year period, we have concluded that penicillin alone is an ef-

fective and economical treatment for bovine anthrax. In the herds with which we have worked, it has been far more effective and less expensive to the owners of the cattle than serum alone. It cannot, of course, replace the use of serum as a prophylactic during an outbreak.

SUMMARY

Losses from anthrax occurred in beef and dairy cattle in both vaccinated and unvaccinated herds. Treatment with anthrax antiserum was expensive and did not satisfactorily stop losses. Penicillin, both with serum and alone, was employed in doses of 100,000 units repeated once or twice at twelve-hour intervals. Of 93 animals treated, 89 recovered, a 4.3 per cent mortality. Penicillin alone was as effective as the combination of serum and penicillin.

Symptoms of Human Trichinosis

The clinical picture of 256 cases of trichinosis, reported in a survey by the U. S. Army Medical Department, presented a uniform pattern which may be accepted as the pathognomonic syndrome. The patients suffered from fever, periorbital edema, headache, anorexia, profuse sweating, generalized muscular aches, weakness, and acute sickness. The presence of eosinophilia and the absence of hypertension, abnormal stools, and urine cinched the diagnosis when this chain of symptoms coexisted. The periorbital edema subsided before the eighth day, the headache and muscular pains by the fourteenth day, and the weakness and malaise by the end of the third week. With the exception of 33 patients kept for longer observation, all of the patients were back to work in six weeks.—*From Current Medical Digest, March, 1947.*

Trichinosis in Wild Rats.—Out of 650 wild rats (*Rattus norvegicus*) caught in various localities of Toronto, 9 (1.4%) were infected with *Trichinella spiralis*. Having been caught at the same time and place, it was believed they had access to infected pork scraps at a nearby restaurant. These figures indicate that rats, like man, acquire the infection only incidentally.—*Canad. J. Pub. Health, 38, (Feb., 1947): 76-78.*

Mercury Poisoning in Swine

E. L. TAYLOR, D.V.M.

Lexington, Kentucky

FEW CASES of mercurial poisoning of animals have been reported. Most of these cases have been in cattle, which seem particularly sensitive to the mercury preparations used by farmers in treatments for lice. Stevens¹ reports 3 such cases in 1941, and the author personally observed several deaths in a herd of Hereford heifers, tentatively diagnosed as mercury poisoning, following the application of binder twine saturated with mercury ointment around the necks of the affected animals. Boley *et al.*² described suspected mercurial poisoning in steers from feeding seed corn that had been treated with a mercury fungicide. No reports of mercurial poisoning in swine were found in the literature.

Case Report.—A call was made, Sept. 8, 1946, to examine a small herd of swine consisting of a 400-lb. sow and her 8 shoats, weighing approximately 90 lb. each. These hogs had been immunized against hog cholera with serum and virus on July 25, 1946, and had been in apparent good health until September 5 when 2 of the shoats refused to eat. They were listless and showed weakness of the hind parts. The sow was confined to a large, roomy stall at one end of a tobacco barn. The shoats were permitted to roam over most of the farm comprising some 50 acres, mostly in blue grass, but including about 10 acres of good red clover pasture. A creek in the pasture supplied water for the shoats. The sow was given water in a trough in her stall. The sow and pigs had been receiving about 5 gal. of shelled corn daily and salt twice weekly.

On September 8, 3 shoats were ill. One was down and could not stand without assistance. Another was recumbent but when approached managed to elevate the hind legs into a standing position and moved backward in circles with the forelegs extended and the head to the ground between the forelegs. The third shoat showed posterior weakness. None of the sick animals would eat or drink. The ears and tails felt cold and body temperatures ranged from 100.5 to 102 F. The sow was apparently normal and, according to the owner, so were the other shoats which at this time were not at hand and were not observed. A tentative diagnosis of poisoning, possibly botulism, was made, and 120 cc. of calcium gluconate with dextrose was administered to each of the affected shoats. The owner was advised to confine the remain-

ing shoats as soon as possible to remove them from the possible source of poisoning.

The next day, the owner reported that 1 of the apparently well shoats had died during the night. The dead shoat and 3 sick ones were sent to the Department of Animal Pathology, University of Kentucky, Lexington. Postmortem examination revealed no gross lesions. The 3 sick shoats were given 40 cc. of botulinus antitoxin each, subcutaneously, and held for observation.

Botulinus antitoxin was also administered to the sow and remaining shoats at the farm as a preventive measure. The owner was advised to keep the animals confined for an indefinite period. It was believed at this time that the source of the toxic material was somewhere in the pasture, since the sow confined to the stall had shown no symptoms of illness.

On September 14, 2 more pigs were sick; 1 was down and in convulsions, and the other showed weakness and blindness, evidenced by running into posts in the barn. Forty cc. of botulinus antitoxin were administered intraperitoneally to each sick shoat.

On September 16, the sow and the other 2 shoats were sick. The sow showed posterior weakness and carried her feet abnormally high as though blind. On this date, the owner's wife supplied information that the owner had been feeding, as a part of the ration, left-over seed corn that had been treated with Semesan Jr., a product containing 1 per cent ethyl mercury phosphate. One ounce of this fungicide had been added to each bushel of seed corn. According to the owner, 1.5 gal. of this treated corn had been mixed with 3.5 gal. of untreated corn to comprise the daily ration of the sow and shoats and, according to him, this ration had been fed for about two months.

This information was immediately telephoned to Dr. F. E. Hull at the University of Kentucky. The 3 shoats left at the University for observation had remained prostrate, neither eating nor drinking. One shoat had died September 15. The other 2 died September 16. Postmortem examination revealed no visible lesions. Stomach contents and the liver of 1 of the latter shoats was submitted to the Public Service Laboratories for analysis. Mercury in appreciable quantity was found in the liver. No mercury was found in the stomach contents, probably because the duration of illness was so long that all of it had been absorbed.

The remaining sow and shoats became progressively weaker, were soon unable to rise, and died within a week.

SUMMARY

Sickness and death of 9 hogs, evidently as a result of eating seed corn that had

The investigation reported in this paper was connected with a project of the Kentucky Agricultural Experiment Station and is published by permission of the director.

been treated with an organic mercury seed protectant, is described. Symptoms included anorexia, weakness followed by paralysis, loss of flesh, subnormal to normal rectal temperature, nervous symptoms (backing and convulsions), and blindness. Autopsy revealed no gross pathologic lesions.

References

- ¹Stevens, G. G.: Mercurial Poisoning in Bovines. *Cornell Vet.*, 11, (1921): 222.
²Boley, L. E., Morrill, C. C., and Graham, R.: Evidence of Mercury Poisoning in Feeder Calves. *North Am. Vet.*, 22, (1941): 161.

Further Studies with a *Vibrio* as the Etiologic Agent of Swine Dysentery

Since 1918, swine dysentery has been regarded as a specific disease in Indiana, and it was first described in 1921.¹ Various names such as hemorrhagic dysentery, bloody diarrhea, bloody scours, bloody flux, and black scours have been given to this entity.

In 1944, one of us (Doyle)² reported the isolation of a *Vibrio* from cases of swine dysentery. Difficulty was encountered in growing the organism under laboratory conditions. At that time, this obstacle resulted in a limited number of trials by feeding cultures of the *Vibrio* to pigs. Following the feeding of the cultures, the pigs developed a diarrhea not unlike that of swine dysentery.

In further studies recently made by the authors relative to the pathogenicity of the *Vibrio* earlier rescribed by Doyle as being associated with swine dysentery, a total of 715 swine were observed and/or utilized.

Eight herds affected with swine dysentery were observed under farm conditions, through coöperation with herd owners and their veterinarians, to acquaint the senior author with the nature of the disease before commencing studies under experimental conditions.

Under controlled conditions, 35 shoats were used to propagate dysentery by the use of natural material. The initial infective material consisted of the cecum and

colon recovered from a field case of swine dysentery. The disease was propagated by feeding a shoat a portion of the diseased cecum and colon from its predecessor in the series. Some of the pigs were vaccinated against hog cholera while others were not.

From a field case of swine dysentery, the writer isolated a *Vibrio* from the mucosa of the colon. Entry was made from the serous surface to avoid the enormous bacterial flora in the lumen of the bowel. A 10 per cent defibrinated horse blood agar grew the *Vibrio* under a 15 per cent concentration of carbon dioxide. By punctual transfer of the culture to fresh medium at the end of forty-eight hours and incubation at 37.5 C. under 15 per cent carbon dioxide, the author was successful in laboratory propagation of the cultures.

Seventy young hogs were divided into eight groups for determining the pathogenicity of the *Vibrio* by feeding. The first two groups considered of 5 shoats each. Unprotected *Vibrio* cultures were fed to each of the 10 shoats with negative results. The next six trials consisting of 10 shoats each, a part of which were vaccinated against hog cholera, were each fed *Vibrio* cultures protected in gastric mucin. The purpose of the gastric mucin was to provide a substitute for the mucus observed in the stools of field cases of swine dysentery. Of the 60 shoats fed *Vibrio* cultures in gastric mucin, 50 developed swine dysentery, a percentage of takes which compares favorably with what occurs when the diseased cecum and colon are fed.

Clinical manifestations and the gross and histopathologic findings in the cases that developed following the feeding of the *Vibrio* cultures in gastric mucin were indistinguishable from those seen in the naturally occurring disease.

All control pigs used in connection with the eight experiments remained apparently healthy. These results furnish additional evidence that swine dysentery is caused by a *Vibrio*.

A more detailed report on this *Vibrio* will be published later.—*Harold D. James, D.V.M., and L. P. Doyle, B.S.A., M.S., D.V.M., Ph.D., Department of Veterinary Science, Purdue University, Lafayette, Ind.*

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¹Purdue University Agric. Exper. Sta. Bull., 257, Oct., 1921.

²Doyle, L. P.: A *Vibrio* Associated with Swine Dysentery. *Am. J. Vet. Res.*, 5, (Jan., 1944): 3-5.

Investigation of nutritional effects is the first duty of medical science.—*Wallace Marshall in Medical Times.*

The Comparative Efficacy of Green and Laidlaw-Dunkin Distemper Vaccination

SALO JONAS, D.V.M.

New Haven, Connecticut

THERE is much confusion concerning the best method of vaccinating dogs against distemper. At veterinary meetings, some practitioners have claimed good results from the Green method, while others have found it very disappointing and have turned back to the Laidlaw-Dunkin method. I have used both methods over a period of years, and it is my intention to give comparative figures which may throw light on the efficacy of both methods.

My Laidlaw-Dunkin records, using two vaccines and one virus, two weeks apart, cover a period of years up to 1944, at which time the Green method was substituted for the L-D method. Table 1 gives the comparative figures of both methods.

and coughing; however, the dog recovered following a second injection a week after the first one.

Most of the animals vaccinated were puppies of various breeds from 3 to 5 months of age, and it may be important to mention that 26 per cent of the breaks occurred within the first two weeks, and 32 per cent during the third and fourth weeks. In other words, 56 per cent of the breaks occurred during the first month, the balance later, and some as late as seven months following vaccination.

During the war, the Green ampules were difficult to open with the triangular porcelain file supplied in the package, and there was a possibility that minute particles of

TABLE I

Method	No. dogs	Total breaks		survived		Died from distemper		Died from encephalitis		Total deaths	
		No.	%	No.	%	No.	%	No.	%	No.	%
Laidlaw-Dunkin . . .	224	22	9.82	6	2.67	14	6.25	2	0.89	16	7.14
Green	300	19	6.33	4	1.33	None		15	5.00	15	5.00

Thus, out of 224 dogs vaccinated with the Laidlaw-Dunkin method, we had breaks amounting to 9.82 per cent with a total mortality of 7.14 per cent of which 6.25 per cent died from typical distemper, and 0.89 per cent died from encephalitis, while out of 300 dogs, on which the Green method was used, mortality was 5 per cent, all due to encephalitis. Four dogs under the Green method showed a severe reaction similar to distemper, but recovered, as compared to 6 recoveries from the Laidlaw-Dunkin method. These figures clearly indicate a much higher incidence of encephalitis following the Green vaccination; however, the total mortality is lower.

The above figures could be revised much to the benefit of the Green method if we took the record of the last year only, which shows that none of the last 80 dogs vaccinated by that method contracted encephalitis. Only 1 showed a severe reaction three days following the injection, manifested later by a purulent nasal discharge

broken glass contaminated the virus, a factor which might account for the higher percentage of breaks in the animals before 1945. Since steel files have been supplied, this difficulty has been overcome. However, even now there is lack of uniformity in the ampules; many of the necks are not properly constricted, and occasionally we find virus adhering to the glass in the upper part of the tube with a loss in dosage when the ampule neck is broken.

I have noticed that the color of the virus after being dissolved in the diluent varies with different batches, a fact which shows that there may be a difference in dosage or potency. This deeper color was especially noticeable in one lot received, and it may not be a coincidence that every dog vaccinated with this batch showed a much more pronounced reaction than usual. I believe that proper refrigeration of the product from place of origin to the time of use, especially when transit is of some

duration, is of prime importance in retaining full potency.

DISCUSSION

Theoretically, the vaccination of dogs against distemper by injection of a virus modified by passage through multiple generations of ferrets is superior to the Laidlaw-Dunkin method. The fact that one injection by the Green method is usually sufficient to provide an active immunity is also a great advantage, because the client makes one trip instead of three, and the veterinarian eliminates the delicate intradermal injection of virus into a struggling dog.

If a greater degree of standardization could be attained in producing the Green distemperoid virus, and if greater care were taken in filling ampules so that none of the virus adheres to the upper part of the neck, this method of vaccination should give better results than any other method now being used.

Fright Disease and Alimentary Intoxication

Fright disease in dogs is seldom mentioned in European literature. Only one French report is found, none from Belgium and Germany. This is surprising in view of the fact that American and English veterinary journals have reported many cases during the past twenty years. It is still more surprising because the disease is often seen in country dogs as well as city dogs in Holland, where it was reported as early as 1924. A serious outbreak occurred in 1925, then sporadic cases only, until another serious outbreak was reported in the winter of 1940-1941.

Since 1927, experiments have been in progress but often have been interrupted for lack of materials for laboratory feeding. Rather large quantities of toxic flour yielded the following results, which are offered as a small contribution toward solution of this important problem.

1) All healthy dogs, both sexes and various ages, developed fright disease with typical cerebral irritation when fed exclusively dogcakes of well-known Dutch factories. (2) The average feeding period was one week before appearance of symptoms, but 1 case came down after two days. (3) The cerebral symptoms were functional in character, the symptoms being reversible. Often the feeding of the

same number of cakes, bearing the same mark and from the same factory but from a different lot of flour, brought recovery in one or two days. (4) Fright disease was produced by Argentine meat (heat-dried), by meat of destroyed Dutch animals (dried and pulverized), by dogcakes which contained no animal products, and by biscuits and porridge made from flour imported from North America. (5) Dogcakes made from flour containing this neurotoxic factor remained toxic for years. (6) Presence of milk, fresh meat, cod liver oil, yeast, or mineral salts in the ration along with the toxic flour did not delay the appearance of toxic symptoms nor favorably affect the outcome if added to the ration after appearance of symptoms. (7) The dog was not protected by one attack, but suffered repeated attacks under proper feeding conditions. (8) Nervous symptoms were the only ones observed. (9) Cats and fowl fed the toxic ration showed no ill effects.

The following conclusions regarding the etiology of the condition may be drawn from these experiments:

a) *Infection*.—It is unlikely that the toxic factor is a living organism or the product of such, because the condition can be produced voluntarily and repeatedly by changing the diet. Neither is activation of a harmless saprophyte and secondary production of a toxin acceptable.

b) *Allergy*.—The disease is not caused by an allergin, for every dog fed the toxic cakes became ill.

c) *Deficiency*.—Fright disease is not a deficiency disease, since a complete diet did not prevent or shorten the course of the disease.

d) *Intoxication*.—The flour used in making some apparently normal dogcakes contains a neurotrophic, thermostable chemical product which is also light and moisture stable. It may be an impurity, part of a poisonous plant, or a residue of some chemical used to whiten flour. It may be a chemical change in the flour itself. In either event, it is definitely linked with flour imported from North America. It was prevalent so long as North American flour was widely fed. It disappeared during the last years of the occupation when North American flour was no longer available.

Fright disease probably is unknown in other European countries because they do not import North American flour. — A. Klarenbeek, D.M.V. (BERN), Utrecht, Holland.

Klebsiella Ozaenae Infection of Mink

J. ANTHONY MORRIS, M.S., and E. R. QUORTRUP, D.V.M.

Bowie, Maryland

ON JULY 3, 1946, 2 immature mink from a ranch in Maryland were submitted to the Fish and Wildlife Service Disease Investigations Laboratory for autopsy. One was not suitable for any laboratory work. Examination of the other disclosed a purulent inflammation of the cervical lymph glands and marked splenomegaly. Cultures were made from the cervical glands, liver, and spleen, but no pathogens were identified. No animal inoculations were made.

On July 31, 1946, a 3-month-old mink from the same ranch was submitted for examination. It was the last one to die on the ranch and, received a few hours after death, it was in very good condition for bacteriologic work. There was a history of a loss of 22 animals out of a total of 140 extending over a period of six weeks.

According to the owner, the syndrome of the disease responsible for his losses was characterized by abrupt anorexia, sluggishness and, toward the end, a paralytic condition followed by coma and death. Most of the sick animals had abscesses on the neck, shoulder region, and a few on the back and hind legs. There was, however, no abscess formation on the specimen examined on July 31. There was no history of spontaneous recoveries.

Grossly, this specimen displayed a characteristic picture of acute septicemia. The thymus showed profuse petechial hemorrhages. Petechiae were noted also on the kidneys and on the serous surfaces. The liver was congested and enlarged, the spleen was about twice the normal size and congested, and the lungs were moderately congested but showed no consolidation. The animal was fat and in good general condition.

Cultures were made from the heart blood and the following organs: liver, spleen, kidney, and thymus. Pure cultures of *Klebsiella ozaenae* were obtained from each without interference of contaminants.

The organism isolated was a nonmotile, gram-negative aerobic rod varying morphologically from coccoid forms to longer bacilli. It occurred singly, in pairs, and infrequently in short chains. A well-developed capsule, which was easily demonstrated with the usual capsule stains, surrounded the organism. This capsule was found both on organisms present in exudates of infected animals and also on those grown on agar slants. Prolonged cultivation on artificial mediums, however, resulted in the loss of the capsule.

Growth occurred readily on the ordinary laboratory mediums. On agar, growth appeared in the form of viscid, white, raised, glistening colonies which stuck tenaciously to the wire loop. In broth, growth was characterized by rapid clouding, the formation of a thin pellicle, and later by a heavy, ropy sediment.

The organism produced no indol when grown in peptone solution nor did it produce H_2S when grown on Kligler iron agar. Nitrates were reduced to nitrites. It reacted negatively to the Voges-Proskauer test and positively to the methyl-red test. Purple milk (Difco) was acidified but not coagulated.

Acid and gas were produced from dextrose, levulose, maltose, mannitol, sucrose, glycerol, sorbitol, raffinose, trehalose, salicin, and arabinose. Acid, but little or no gas, was produced from lactose, galactose, and adonitol. Dulcitol and dextrin were not attacked.

Subcultures of *K. ozaenae* were inoculated into ferrets for determination of the pathogenicity of the organism. Twenty-four-hour agar tube cultures suspended in 5 cc. of saline solution in doses of from 0.2 to 0.5 cc., inoculated intraperitoneally, killed ferrets in from sixteen to twenty-six hours. The same amounts given subcutaneously to 2 ferrets resulted in death in from three to four days. The lesions observed in these ferrets at postmortem examination were similar to those observed in the last mink examined. One ferret, inoculated by scarification of the skin on

From the U. S. Fish and Wildlife Service, Patuxent Research Refuge, Bowie, Md. (Morris); and the U. S. Bureau of Animal Industry, Fur Animal Disease Investigations, Washington 25, D. C. (Quortrup).

the belly and rubbing in a loopful of culture, died on the thirtieth day following inoculation. Lesions produced in this animal consisted of an ulcerous, discharging wound at the point of inoculation and a regional adenopathy with abscesses of the mammary lymph nodes and the left, inguinal lymph gland. There was also a marked splenomegaly and dark, tarry blood.

Attempts to transmit the infection by feeding broth cultures in the drinking water and by scarifying the mucous membrane of the mouth and rubbing in a loopful of culture have so far failed. The mode of natural transmission is unknown at the present time, but a number of experiments are in progress at this station which will be described at a later date. The ranch owner informed us that 1 mink which died in the pen was partly eaten by its mates, and these did not contract the disease.

Paraffin sections, in duplicate, stained with hematoxylin and eosin, and with Giemsa's stain, were made from the organs of 3 of the inoculated ferrets. One case was examined at this station, and 2 cases were examined by Dr. H. R. Seibold of the Pathological Division, U. S. Bureau of Animal Industry, to whom we are indebted for the following description:

In the liver, there were marked vacuolation of the parenchymal cells (probably fatty change) and beginning centrilobular necrosis. The spleen showed reactive hyperplasia consisting of multiplication of large, mononuclear phagocytic cells in the red pulp of that organ. In the kidneys, there was moderate vacuolation of the epithelium of the proximal tubules (probably fatty change); there also were scattered foci of hemorrhagic necrosis in the region of the medulla bordering on the cortex. The lungs of 1 of the animals showed a variable amount of subpleural hemorrhage, but no consolidation was found. The two other lungs were negative. There were scattered hemorrhages in the thymus and edema of the connective tissue between the thymic lobules. Many reticular cells in the thymic stroma were swollen and vacuolated. In one lymph node section examined, the lymph sinuses contained many large, mononuclear cells engaged in phagocytosis of bacteria. Numerous bacteria were found in all the tissues examined, both in the blood vessels and in the lymph spaces.

So far as we know, *K. ozaenae* has not been previously described in mink. But while preparing this paper we received a communication from Dr. Paul Genest of the Department of Agriculture, Quebec, which said that he had recently found in mink an infection by an organism of the

Friedländer group. The disease, he went on to say, was characterized by the formation of nodular abscesses which were usually found on the lower part of the neck and on the pectoral and thigh muscles. Postmortem examination revealed splenomegaly as the most prominent lesion.

These represent the only cases of which we have any record.

SUMMARY

The isolation of *Klebsiella ozaenae* from mink is described. The symptoms and pathologic changes associated with an infection by this organism are discussed and the isolated organism described. So far as we are aware, *K. ozaenae* has not previously been described in mink.

Limed Litter for Chickens

Hydrated lime can be used safely as a deodorizer and as a preservative of nitrogen in droppings in the floor litter of brooder and laying houses. It appears to prevent the spread of coccidiosis.

In a two-year test at the Ohio Agricultural Experiment Station, there was no evidence of coccidiosis in 10,000 chicks, while before the lime treatment few broods escaped the disease. Moreover, by frequent stirring, the litter was kept in good condition without removal for twelve to sixteen weeks, even during damp seasons. The air also was more free from odors.

Four or five weeks after fresh litter is provided, hydrated lime should be scattered over it at the rate of 10 to 15 lb. per 100 sq. ft. of floor space at intervals of two to four weeks or longer, depending upon compaction and surface condition. The fresh lime should be mixed thoroughly with the old litter; otherwise it may have a caustic effect on the chicks' feet. The litter should be stirred and redistributed every two or three days for the first eight weeks; after that daily stirring is advised. —[D. C. Kennard and V. D. Chamberlin: *Lime Treatment of Floor Litter for Chickens. Farm and Home Res.*, 32, (Jan.-Feb., 1947): 11-14.]

Turkey raisers report that foxes will not invade the roost if the surrounding grounds are floodlighted.—*Western Live-stock Journal*.

Generalized Acute Cutaneous Asthenia in a Dog

MYRON S. ARLEIN, D.V.M.

Boston, Massachusetts

AN EXTRAORDINARY INCIDENT of the loss of tensile strength of a dog's skin was observed. Moderate pressure or stretching at any area caused a complete rupture extending from the stratum corneum to the subcutis. Strangely, there was absence or an inconsequential amount of hemorrhage associated with the tearing. As no reference of such a case has been found in either man or animal, it is desired that this bizarre phenomenon be recorded.*

The animal was a brown and white mongrel Spitz female, 11 months of age, brought to the hospital because a flap of skin on the toes of a hind paw was separated from the underlying tissue. The cause of the injury was not definitely ascertained, although a mild pruritus might have caused the dog to bite itself. We had intended to suture the wound, but when the dog had been anesthetized the startling condition of the skin was detected. Although the skin appeared white, clear, and normal, it had the consistency of boiled chicken skin as judged by the rupturing on manipulation. Suturing the wound was not considered feasible because no suture material would hold in such fragile tissue.

A more careful examination revealed a number of small areas in which the skin had been broken by the restraint applied during the administration of anesthetic, and other tears obviously of earlier occurrence. A small, serum-infiltrated ulcer on the left hip appeared to be the oldest lesion. The texture of the skin, felt between the fingers, was soft and putty-like.

The astounding ease with which the skin could be ruptured was dramatically demonstrated in the course of normal handling. When the animal was grasped by the scruff, a complete collar of skin from head to shoulders was torn from the underlying cervical muscles. Only the incomplete severance at two places held the skin collar to-

gether. Even in this event, there was practically no hemorrhage. At this point, the animal was sacrificed as a humane act.

The owner had been totally unaware of the strange condition and had possessed the animal since its birth. It was a lone pup whelped by a bitch also owned by the client. The paternal ancestor was not known, and the pups of previous litters were normal.

The ration had consisted of canned meat, mostly Spam, table scraps of meat and vegetables, dog biscuits of unidentified brand, milk, and eggs. According to the owner, fresh meat was fed infrequently. A complete blood study was made with no significant findings, to wit:

Red blood cells.....4,250,000/cu. mm.
White blood cells..... 35,000/cu. mm.

Differential count:

Polymorphs	78.5%
Lymphocytes	4.5%
Monocytes	14.5%
Eosinophils	5.0%
Normoblasts	0.5%
Basophils	0.0%

Hemoglobin (Tallqvist)100

The leucocytosis can be explained as an obvious reaction to infection in the skin wounds.

According to the physiologic concept, the tensile strength of skin depends primarily upon collagen. Inasmuch as this substance is dependent upon vitamin C, the possibility of an aberrant vitamin C metabolism was investigated. Radiographs taken of the longbones were negative. The gums and teeth also appeared normal. Subsequently, a quantitative estimation of vitamin C in the blood plasma was made by the pediatrics laboratory of a local hospital which reported a zero value for vitamin C. Ostensibly, it would seem that this finding was significant. But a review of several references failed to establish a normal level for vitamin C in dog plasma. Moreover, the nutrition laboratory of Harvard Medical School and Dr. Mark L. Morris, New Brunswick, N. J., could attach no pathognomonic significance to the laboratory report.

From the Angell Memorial Animal Hospital, Boston, Mass.

*Since this report was submitted for publication, a report of a similar condition has been published in the *North American Veterinarian* (28, (March, 1947): 166), under the title "Congenital Defect of the Skin."

A dermatologist at a nearby hospital and several members of the Harvard Medical School faculty, including an anatomist, an endocrinologist, and a pathologist, were invited to view this case. These consultants admitted their inability to establish a definite cause, nor could they recall any reference to a comparable condition in medical literature.

The necropsy was supervised by Dr. Henry Bunting, of the Harvard Medical School. The gross findings were as follows:

Skin.—Soft, white, pliable, putty-like to the touch, and tearing freely on manipulation. An ulcerative lesion, located on the left hip, showed loss of hair, serum infiltration on incision, and a fairly opaque, pancake mass of fibrous tissue, 0.75 cm. thick, lying between skin and muscle.

Liver.—congested; *spleen*, normal; *adrenal gland*, apparent decrease or absence of lipid tissue; *kidneys*, normal; *bladder*, normal; *mesentery*, tore readily; *intestines*, more fragile than normal; *esophagus*, normal; *genital tract*, normal; *diaphragm*, normal; *lungs*, normal; *heart*, small amount of translucent, pericardial fat, organ appeared flabby, chambers and valves apparently normal; *aorta*, good elasticity but ruptured when grasped with forceps; *trachea*, normal; *peritoneum*, normal; *muscle*, groups attached to extremities tore away readily from bones; *subcutis*, absence of fat; *ligaments*, normal; *bones*, cortex apparently normal; periosteum delicate and not readily visible.

Histopathologic studies were made of a number of tissues by Dr. Bunting. His report follows:

Skin.—The layers of the dermis were somewhat thinner than in comparable areas from a normal dog of about the same age. There was, however, no significant departure from normal in the size or distribution of fibers of the papillary or reticular layers.

Granulating Wound.—There was thick granulation tissue present on either side of the central cleft which was noted in gross findings. There was abundant collagen being formed.

Aorta.—There was a normal amount of collagen and elastic tissue present.

Adrenal.—The gland was deficient in cortical lipoids. The steroids, in particular, were diminished as based upon reactions characteristic for these substances.

Liver, Kidney, and Small Intestine.—These showed no abnormal microscopic findings.

COMMENT

The striking deficiency in strength of the collagen was not apparent in its histologic appearance. While the low adrenal lipoids were consistent with scurvy, the adequate collagen formation and the lack of excessive cellularity in the granulation tissue certainly were not.

SUMMARY

A case of freely tearing skin in a dog is presented. According to the information available, this is the first report of the loss of tensile strength in the skin of an animal or man. The etiology could not be established. Necropsy findings and laboratory studies were inconclusive. Although collagen is the basic material of the skin's strength, no deficiency of it could be demonstrated by histopathologic studies.

Flavonols Antagonize Dicoumarol

Dicoumarol induces hypoprothrombinemia and hemorrhage, and it also exerts a bacteriostatic action toward certain bacteria. The latter is not antagonized by vitamin K, and is therefore probably independent of the former action. Three flavonols—rutin, quercitrin, and quercetin—were found to be capable of neutralizing the bacteriostatic action of dicoumarol in connection with trials by workers in the USDA (*Science*, Jan. 31, 1947). This, the first reported evidence of antibiotic action of flavonols, suggests the possibility of using these products, especially rutin, in veterinary medicine to antagonize the hemorrhagic action of dicoumarol *in vivo* in cases of sweet clover poisoning.

Leucemia may be treated as successfully with roentgen rays as in any other way, according to a report in *Proceedings of Staff Meetings*, Mayo Clinic, Aug. 21, 1946. The treatment is entirely palliative, but the useful capacity of the patient is maintained for a longer time.

Because of its antioxidant activity, vitamin E plays an important rôle in protecting vitamin A and carotene from oxidation, both in the alimentary tract and in the cells. —*Nutr. Rev.*, November, 1946.

Spontaneous Pylorospasm in Rabbits

Livestock and poultry decreased so markedly in Holland during the war that shortage of meat, eggs, and dairy products created a widespread interest in rabbit culture, especially in the cities. A curious disturbance of the digestive tract was frequently seen, even when sanitary conditions were adequate for the control of coccidiosis. It usually occurred in adult rabbits, and often when they were in good physical condition.

Symptoms.—Sudden loss of appetite was the most characteristic and often the only symptom noted during the first day or two. Complete anorexia in an otherwise normal animal is surprising and striking. Tympany often was noted when attention was drawn to the anorexia. The gas was usually accumulated in the stomach and the cecum. Peristaltic action, as determined by the use of the phonendoscope, was usually abnormal: sometimes sounds were barely audible, at other times they were intensified. The latter condition was noted most frequently on the right side over the cecum. In one case, the rhythmic cecal contractions could be palpated. Defecation was diminished, and the pellets passed were small, dry, and sometimes coated with mucus. Water intake was increased, as a rule, but urination was decreased. Some animals ground the teeth, probably a symptom of abdominal pain since there was no inflammation of the mouth, tongue, or teeth.

Course.—Most affected animals died in one to five days. The few that recovered seemed to do so abruptly, with complete disappearance of all symptoms when the animal began to eat.

Lesions.—Postmortem examination revealed acute intestinal inflammation, with atony, necrosis of the mucosa, and hemorrhagic areas. All other organs remained apparently normal.

Experimental.—This condition has been studied because of the serious inroads it made on an already depleted food supply. Radiographic study following a barium sulfate meal showed a complete separation of the stomach from the intestines with no passage of barium beyond the pylorus. This separation was due to spasmodic contraction of the pylorus which, in turn, was the cause of dehydration, auto-intoxication, and death.

In attempts made to relieve the pylorospasm, Lentin, atropine, adrenalin, papaverine, dolantine, opium, codeine, veratrine, veritol, magnesium chloride alone and in combination with calcium and sodium, all were tried without effect. Some were given orally, some were injected, and some were given as enemas. The occlusion never was corrected, nor did urethane anesthesia relax the spasm. Massage of the abdominal wall with spirits of camphor, as well as massage after a cold bath, were ineffective. In a few experiments, oral dosage with oleum ricini or ricinoleic acid was partially successful.

Conclusion.—The cause and treatment of pylorospasm are not yet known. The condition is probably of alimentary origin, since it occurred in a period of great scarcity of food.—A. Klarenbeek, D.M.V. (BERN), Utrecht, Holland.

Thromboplastic Properties of Penicillin and Streptomycin

The coagulation time of blood was accelerated within an hour in each one of a series of more than 200 experiments with amorphous penicillin of every brand examined, whether the penicillin was administered intravenously, intramuscularly, or as an amphogel mixture through a stomach tube. Sometimes the effect was apparent in fifteen minutes, and it usually persisted for several hours. The experiments were conducted by D. I. Macht (*Science*, 105, (March 21, 1947): 313-314), who used penicillin X, K, G, and F. Comparable thromboplastic properties were also found in streptomycin.

Coagulation time was shortened for long periods in rabbits, but in both rabbits and cats the effect was antagonized when the stomach tube was used to administer suitable doses of dicoumarol. Embolic accidents incident to antibiotic therapy have been reported, and they present a hazard to be considered even though the natural body forces tend to avert them.

The hog slaughter for 1946-1947 will add up to less than that of 1945-1946, but the USDA predicts that 1947-1948 will again show an increase owing to the big pig crop expected this spring, which is estimated to be 5 to 10 per cent higher than in 1944-1945.

Views on Brucellosis*

Americans are consuming unpasteurized milk and cream from about one-third of a million brucellosis-infected cows.—*B. T. Simms, D.V.M.*

It is difficult to see how any hard and fast rule defining the limits of vaccinal resistance can ever be formulated that will satisfy the unknown variables existing in different herds.—*C. K. Mingle, D.V.M.*

If we find infection in 10 per cent or more of the breeding unit of swine, we do not try to salvage any of the negatively reacting animals, but consider the entire breeding unit as infected.—*L. M. Hutchings, D.V.M.*

Discrepancies in the results of the agglutination test in cattle are confined to a very small percentage of the total cattle population, probably less than 5 per cent, but the very nature of things has tended to put these discrepancies in neon lights before the people.—*C. R. Donham, D.V.M.*

Do you gentlemen think that firms which manufacture strain 19 and sell it indiscriminately to anyone who has the price, I ask you, do you think they have the interest of agriculture at heart?—*O. C. Shockley, D.V.M.*

Dr. [Sir William] Osler once said, "Know ye syphilis and the knowledge of all other diseases will be added unto you." I'm sure that if he were living today he would change that to brucellosis, because I believe that brucellosis in the diagnostic field offers more problems than syphilis ever offered.—*Neal Davis, M.D.*

In man, certain mental diseases may arise out of *Brucella* infection.—*Thurman B. Rice, M.D.*

Too often, practitioners are regulated in the use of vaccines while laymen may use them promiscuously, without regard to the damaging effects on subsequent brucellosis control programs.—*F. A. Hall, D.V.M.*

*Excerpts and briefed statements from papers and informal talks given before the regional conference on brucellosis, sponsored by Indiana University and the U. S. BAI, Indiana University Medical Center, Indianapolis, Sept. 26-27, 1946.

A Suspected Case of DDT Poisoning in a Cat

An 18-month-old, domestic, male cat was presented for treatment at the Veterinary Dispensary, Fort Monroe, Virginia. More than two weeks previously, the cat had been treated for a mild gastritis that cleared up in a few days. Since then, he had been eating well and appeared normal until the night the owner dusted the fur with the Army's standard larvicide powder (10% DDT in a talc base). The cat licked himself diligently and drank large amounts of water.

The morning following the DDT application, the veterinarian examined the animal. The pupils were widely dilated, the eyes were wide and staring, and the temperature was 103.5 F. The most significant symptom was a general, cutaneous, muscular tremor. The facial muscles also twitched vigorously—especially when the cat was disturbed or handled. Respirations were normal. No diarrhea or vomiting was noted at any time.

As no antidote was known by the author, symptomatic treatment was followed. One cubic centimeter of sodium pentobarbital was given intraperitoneally. After the sedative became effective, the pupils contracted under strong light; previously they did not. Muscular tremors lessened, and the animal rested, though not under surgical anesthesia. Seventy-five cubic centimeters of 5 per cent dextrose in physiologic saline solution were given intraperitoneally. The animal was kept quiet the remainder of the day. That night, he could stand feebly.

The following morning, the temperature was normal and he drank some milk and that night ate some canned fish. The pupils were normal and the muscular tremors had disappeared. The cat looked normal and was discharged the following morning. Two weeks later, the cat was well and no trouble had been noted.

It is realized this case of suspected DDT poisoning was a mild one. Diagnosis rested mainly on the owner's history of the case. I have used DDT powder extensively on cats in the past with no toxic reactions. Undoubtedly, the patient was highly susceptible to DDT toxicity even when small amounts of the larvicide were used.—*Capt. Erskine V. Morse, V.C., U. S. Army, Fort Monroe, Va.*

White Snakeroot Poisoning— The Hush-Hush Malady

The fatal poisoning of farm animals by browsing the foliage of white snakeroot (*Eupatorium urticaefolium*) and comparable poisoning of man by consuming the poisoned animals' milk, butter, and sometimes flesh, has no counterpart among former medical mysteries; they differ in terror from smallpox and yellow fever only in geographic distribution. The endemic plague, brought to mind, quite incidentally by Tehon, Morrill, and Graham (*Cir. 599*, University of Illinois, 1946; abstr. in the *JOURNAL* (April, 1947):275), that white snakeroot poisoning of man and animals was once a master killer. A century ago, it took life from man and farm animals galore, made scared settlers desert whole townships, smashed real estate values, and checked the resettlement of large areas of arable land for several decades.

Biologist Edwin Lincoln Moseley, past president of the Ohio Academy of Science, Bowling Green, Ohio, in his excellent book *Milk Sickness Caused by White Snakeroot*, 1941, by far the most comprehensive treatment of this onetime plague, points out that it took from the 1820's to the late 1920's to solve the mystery. The decline of its terrors preceding the 1870's up to recent times was due to the natural elimination of the weed by changes in farm operations. White snakeroot thrives mostly in shaded places and strips skirting woodland pastures. The plant is indigenous to Ohio, Indiana, Illinois, Kentucky, and scattered areas of North Carolina and Tennessee, where it still flourishes in favorable spots.

Investigational work covered metals, poisoned springs, flies, spiders, mushrooms, scores of other plants, various bacteria, and no end of vague theories. Scientists, physicians, politicians, and, particularly, real estateors were loath to publicize milk sickness, so only squibs were published about it. Farmers practiced prevention that science withheld. It was truly a hush-hush plague, until Couch (the *JOURNAL*, Sept., 1928: 603-617) isolated the principle which he named tremetol ($C_{10}H_{22}O_3$). This discovery was reported in the *Journal of Agricultural Research*, Sept. 15, 1927, and there ended the strangest story of veterinary his-

tory in this country. However, practitioners are admonished not to overlook white snakeroot and milk sickness.

Brucellosis and Blindness

Ocular damage complicating human brucellosis is more common than physicians generally suppose. In some cases, vision is totally destroyed. In the treatment of ocular infections, systemic invasion of the *Brucella* organism should be considered and the treatment managed accordingly. Ocular brucellosis was treated with Forshay vaccine, immune serum, non-specific protein, and sulfonamide therapy, together with local treatment.—*L. J. Agin, Ohio State M. J.*, 43, (Feb., 1947):159. *Abstr. J. Am. M. A.*, 133, (Apr. 26, 1947): 1312.

Antibiotics in Erysipelas.—Woodbine and Cheeseman of England (*Vet. J.*, 103, Apr., 1947: 149-152) found that penicillin was almost five times more effective than streptomycin, weight for weight, in protecting mice against *Erysipelothrix rhusiopathiae* infection. *In vitro*, penicillin was about 100 times more active than streptomycin.

Demerol Addiction.—The Council of Pharmacy and Chemistry of the AMA voted to reexamine the addictive properties of demerol hydrochloride. The Council previously ruled that the product be labeled so as to indicate the possibility of addiction. Based on contradictory reports, the *JOURNAL* (Nov., 1944:288) expressed doubt in that respect since demerol may be found an important substitute for morphine in veterinary medicine.

Unidentified Spirochete in Hen Tissues.—Writing in *Public Health Reports* (Feb. 28, 1947), Steinhaus and Hughes report the discovery of an unidentified spirochete "apparently from hens, but possibly also from hen eggs," and claim this is the first evidence of a spirochete occurring in hens in the United States.

Most meat-producing animals are slaughtered before they have completed more than one-third of their normal life span.

A Destructive Turkey Disease

L. P. DOYLE, M.S., D.V.M., Ph.D., R. M. CABLE, M.S., Ph.D., and
H. E. MOSES, D.V.M., M.S.

Lafayette, Indiana

DURING THE summers of 1944 and 1945, destructive outbreaks of enteritis in turkeys occurred in southeastern Indiana. Some growers there had raised turkeys successfully with increasing size of flocks for at least ten years, and their success had attracted new growers to the industry.

The birds which became affected were from various sources: (1) eggs produced locally and hatched locally or elsewhere; (2) eggs shipped into the area and hatched locally; and (3) poults from hatcheries outside the area. On some farms where outbreaks occurred, breeding stock had been kept over from the preceding year. On others equally affected by the disease, no breeders were maintained at any time, various sources being depended upon for poults. Feed and water supply also varied from farm to farm. Sanitary conditions ranged from poor to excellent on farms where the outbreaks occurred.

In 1944 and 1945, the disease appeared about July 1, and outbreaks were said to have occurred almost simultaneously on several farms. On some, the disease was first noticed in birds which were on range. On other farms, it started in birds housed in brooders with sun porches. On one farm, ten days after the disease was first observed in birds on range, rapid losses began among poults about 2 weeks old in batteries in an exceptionally well-managed brooder house. So far as could be determined, these birds died of the same disease that affected the older ones.

Curiously enough, there were no outbreaks during the summer of 1946, the only instance of important loss in the area being due to blackhead. After their experience in 1945, several growers did not attempt to raise turkeys in 1946. However, several others did operate on about the same scale as before and under the varied conditions as to sources of poults and feed,

maintenance of breeding stock, and management that had been practiced during the preceding years.

Approximately 20,000 birds died as a result of the 1944 outbreaks. During three weeks in July, 1945, approximately 12,000 died in an area of only a few square miles. The mortality was rarely less than 50 per cent, and losses were limited almost entirely to poults less than 10 weeks of age. A typical example was one farm on which 1,975 of 2,000 birds, kept on wire floors, were lost within three weeks. On another farm where sanitary conditions were excellent, 940 of a flock of 1,000 birds died in a short time. On neither of these farms had breeding stock been maintained. No farm on which the disease occurred in 1944 escaped the following year. Late in July, 1945, the disease appeared on several farms outside the area previously affected.

EXPERIMENTAL

Several transmission experiments, performed in the laboratory during the summer of 1945, indicated that the disease was transmissible by cohabitation and ingestion of droppings. The rapid spread of the disease through stocks of experimental turkeys kept away from sick birds suggested that it was transmitted by some unrecognized means. The incubation period in experimentally infected birds was four to eight days. Death occurred as early as the eighth day after exposure began.

It was the opinion of some growers that the disease was spread by flies. During the summer of 1945, information concerning the possibility of this means of transmission was sought. First, large numbers of flies, largely *Musca domestica*, were trapped on droppings beneath sun porches on which many turkeys were dying. The flies were then fed to healthy poults, but none contracted the disease. Since the area was a considerable distance from the laboratory, several hours elapsed before the flies were fed to the birds. Meanwhile, two cages were so constructed that one half was flyproof and the other was not, with a solid partition separating the halves of each cage. One was placed near the houses with sun porches on a farm where 1,975 of 2,000 turkeys had died, and the other in a similar location on another farm where 3,000 of 8,000 birds had already died within a period of three weeks. Experimental poults, about four weeks of age, were obtained from an outside source.

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Associates in the veterinary science department (Doyle, Moses), Agricultural Experiment Station; professor of parasitology (Cable), Department of Biology; Purdue University, Lafayette, Ind.

On both farms, some of these birds were placed in the houses with sick birds, while others were put in each part of the experimental cages. Feed and water were placed in the cages only at night. On both farms, all birds placed in the houses contracted the disease. On one farm, none of those placed in the cage became affected; on the other, the birds in the fly-proof section of the cage remained healthy, while all those in the other half of the cage contracted the disease. The difference in the results obtained on these two farms may have been due to the small number of sick birds still present on the first farm at the time the experiment was started.

The disease was characterized by sudden onset, rapid spread, and high mortality. Some of the birds died while in good flesh, but many lost considerable weight before death. The affected ones were usually listless, often appeared sensitive to cold, and became pale and weak. Diarrhea with mucus in the droppings was common. No nervous symptoms, except possibly some lethargy, were observed.

Films of the blood of moribund poults, stained with Wright's and Giemsa's stain, revealed no intracellular parasites.

Postmortem examination revealed surprisingly few pronounced gross lesions. Petechial hemorrhages were found in the intestinal mucosa of some of the birds that were examined comparatively soon after symptoms first appeared. The small intestine frequently showed mucoid enteritis and sacculations or bulbous regions. The intestinal content was watery and sometimes frothy. Pale or whitish foci in the pancreas were conspicuous. The other lesions commonly found were similar to those associated with malnutrition or inanition, viz., dehydration of the skeletal muscles, fragile bones, atrophy of some of the visceral organs, and flesh-colored adrenals. Bacteriologic examination of the liver and spleen of several representative birds revealed no significant organisms. Microscopic examination of the intestinal content and scrapings of the mucosa showed few coccidia, but flagellates were numerous. Among those observed were *Chilomastix* sp., *Trichomonas gallinarum*, and *Hexamita meleagridis*. The last species occurred more consistently than the others, although it was often present in very small numbers. Since *H. meleagridis*^{1, 2} is reported to cause a catarrhal enteritis of turkeys with symptoms and lesions indistinguishable from those described above,

a diagnosis of hexamitiasis seemed to be warranted.

Shortly after several sick birds had been taken to the laboratory for study during the summer of 1945, a group of young poults intended for experimental use showed symptoms identical to those that had been observed in the field, although this group had been kept separate from sick birds. All of them died in a few days, and a new supply was obtained. Again, the disease spread to the stock supply. That time, many of the dead and moribund poults were thoroughly examined, but no *H. meleagridis* could be found. This led the writers to suspect that the flagellate was not responsible for the disease at hand.

During the summer of 1946, it was planned to carry out extensive investigations concerning the nature of the disease and the biology of *H. meleagridis* in case further study indicated its rôle as the causative organism. First, two series of experiments were performed in an attempt to produce symptoms by successive passage of *H. meleagridis* through poults of susceptible age. The source of flagellates for the first series was a breeder turkey obtained from a farm where heavy losses had occurred during the previous summer. A saline suspension of flagellates, removed by scraping the cecal tonsil region of the old bird, was administered to 10 poults 5 weeks of age; each bird received 5 cc. of the suspension by mouth and the same amount by rectum. At four- to ten-day intervals thereafter, five successive groups, 7 to 10 birds in each, were inoculated with pooled material obtained by scraping the bursae of the birds in the preceding group. The ages of the birds in the second to sixth groups were 6, 2, 2, 3, and 3 weeks, respectively. Each bird received a large number of flagellates. At first, attempts were made to count the organisms, but it was found that the tendency of the flagellates to adhere to bits of removed tissue made accurate counting impossible.

The source of flagellates for the second series of passages was 1 of a flock of 12-week-old birds on a farm where no breeders had been kept over the winter following heavy losses in 1945. This flock was on range when several birds were examined, and each was found to harbor *H. meleagridis* in the bursa. The bird selected showed an especially heavy infection and marked signs of unthriftiness. Beginning with flagellates from this bird, the second series consisted of successive passage through six groups of poults, 10 in each group. The ages of the birds in these groups were 1, 2, 3, 4, 5, and 6 weeks, respectively, and the time between inoculations was uniformly seven days. All birds in both series were kept for several weeks for observation and comparison with the control groups which were, in all cases, birds the same age and from the same source as those in the corresponding experimental groups.

All inoculated birds in all groups became infected with *H. meleagridis*. In no case did symptoms of the disease under investigation appear. Of the 110 inoculated birds, 4 died: 2 from accidents, 1 from blackhead, and 1 from rickets.

Late in the summer, all birds in the first series were killed and examined; in every case, *H. meleagridis* was found in small numbers in scrapings of the cecal tonsils and in larger numbers in the bursae. In no instance, however, were flagellates observed in the small intestine. To determine whether they would occur in the small intestine if the birds were examined early in the infection and also to determine whether the site from which the flagellates were taken for inoculation might affect the results obtained, a third series of passages was begun. The source of flagellates for this series was birds of the second passage of the second series, and scrapings of both the cecal tonsils and bursae instead of the bursae alone were used for each passage. This necessitated sacrificing each group, and when this was done, a careful search was made for flagellates in the small intestine so that, if present, they might be used for subsequent inoculations. However, none was found in the small intestine. Only two passages were made in this series because the only poultts available were approaching the age at which they are said to become resistant to the disease. However, all of the experimental birds in this series became infected with *H. meleagridis*, and none showed any symptoms.

Along with the above experiments, a technique was developed whereby *H. meleagridis* was inactivated in intestinal contents by heating in a manner that presumably would not destroy pathogenic agents. It was planned to use this method in attempts to produce the disease with material from sick birds. An opportunity to attack the problem from this angle was not presented because, as already stated, the disease failed to reappear during 1946, and none of the birds experimentally infected with *H. meleagridis* developed symptoms of enteritis.

Numerous attempts to cultivate *H. meleagridis* were unsuccessful. The same was true of efforts to obtain the flagellate free of bacteria by means of migration tubes and micromanipulation. When inoculated into the chorioallantoic sac of 7-day chicken embryos, the flagellates could be found later only in very small numbers in the chorioallantoic fluid and persisted there for a maximum of seventy-two hours. This was unexpected since the chicken is susceptible to infection with *H. meleagridis*. It is possible that the flagellate might have become established had older embryos been inoculated, since the cecal tonsils and bursa, for which it shows preference, would be more completely developed. Another flagellate, *Trichomonas gallinarum*, which was

sometimes present in the inoculum, established itself in the chorioallantoic fluid and was present in the intestine in large numbers before the chick hatched.

In vitro tests showed that *H. meleagridis* was not rapidly affected by fairly concentrated solutions of sulfanilamide, sulfapyridine, sulfathalidine, and penicillin; the flagellates lived in each of these for two hours or longer. During the summer of 1945, sulfathalidine and penicillin were administered to sick birds without favorable results. Sulfaguanidine was used in field outbreaks without beneficial effect. During the summer of 1946, 15 poultts from the second series of experimentally infected birds were given atabrine, a drug reported³ to be effective against *Giardia*, which is closely related to *H. meleagridis*. Ten birds received 0.05 Gm. of the drug twice daily, and 5 were given 0.025 Gm. After five doses, 2 birds in the first lot died, and all the remaining birds that had received the drug showed symptoms of atabrine poisoning. Treatment was discontinued. The dead birds contained living *H. meleagridis*, and all the remaining birds harbored the flagellates when killed and examined a day later. From these results, it may be concluded that atabrine is not effective against *H. meleagridis*, at least in the carrier state.

SUMMARY

A report is given of a disease which affected young turkeys and resembled closely that currently known as hexamitiasis. Outbreaks occurred in southeastern Indiana during two successive years but, for unknown reasons, failed to reappear the third year. The disease was characterized by high mortality and by catarrhal enteritis. It was transmissible by cohabitation and through the droppings. *Hexamita meleagridis* was associated with field cases of the disease, but it was not found in a number of laboratory cases. The flagellate was present in healthy poultts in the field during the year when the disease failed to reappear. *H. meleagridis* was propagated in serial transfer through groups of poultts and failed to produce recognizable symptoms. It is concluded that the disease observed was due to an etiologic agent as yet unknown. Certain observations on the use

Benjamin Franklin established the first scientific contact between America and Russia.—*Sci. News Letter*, May 3, 1947.

of drugs in active cases and against *H. meleagridis* are reported.

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Ascaris Suis Embryos in Pig Livers

As *Ascaris suis* proceed through the visceral organs to complete their life cycle, the damage inflicted in the trans-hepatic journey has been seldom mentioned as a factor of porcine ascariasis. However, Dr.

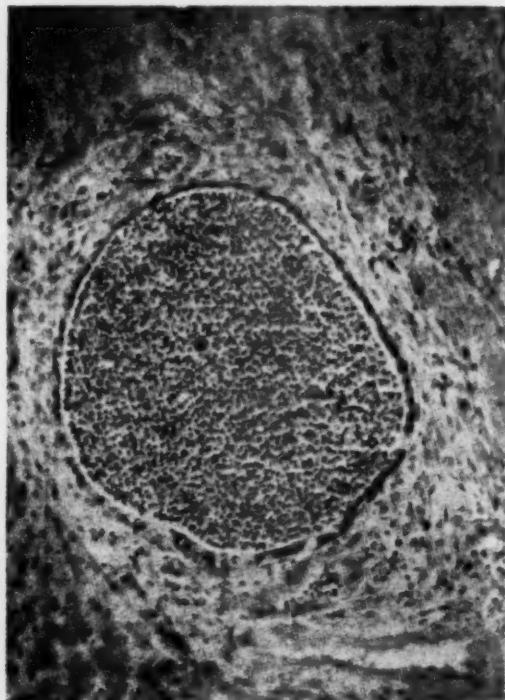


—From Bulletin de l'Académie Vétérinaire
 Fig. 1—Two *Ascaris* seen in considerably enlarged canals. The surrounding lobules are compressed and atrophied. x 12.

John Bengston, U. S. BAI pathologist in Chicago, says (personal communication) that *Ascaris* is recognized as one of the agents responsible for liver trouble in slaughtered pigs.

An examination of the livers of *Ascaris*-infected pigs by Commény, Drieux, and

Verge (*Bull. Acad. Vét.*, 19, (June, 1946): 190-195) incriminates this parasite as a cause of cholangitis which, previously, has been attributed to other agencies such as distomatosis and cysticercosis. Their microscopic examinations of liver sections revealed the presence of *Ascaris* embryos, *en masse*, in the biliary canaliculi with marked inflammation and polynuclear infiltration (fig. 1), the more precise character of which was established under higher magnification (fig. 2). Quoting: "There is no doubt that some of the embryos swarming through the parenchyma of the liver are definitely arrested and provoke either the formation of systematized nodules or diffuse inflammation," which previous authors, under the name of chronic, interstitial hepatitis, attribute to other para-



—From Bulletin de l'Académie Vétérinaire
 Fig. 2—Suppurative cholangitis of a biliary canaliculus near one of the *Ascaris*. x 49.

sitisms. Other than that the hepatic phase of ascariasis has not been conspicuously described, the authors claim no priority in respect to its occurrence. Neumann (1888), Ortman (1891), Wheeler (1900), Martel (1921), Bru (1926), and others have described the sojourn of *A. suis* in the liver.

NUTRITION

Food Allergy in Dogs (A Preliminary Report)

RALPH POVAR, D.V.M.

East Providence, Rhode Island

SUPERSENSITIVITY of dogs to the ingredients of certain foods has been demonstrated by Burns,¹ Schnelle,² and Pomeroy.³ Positive skin reactions were used by these investigators as the basis for determining sensitivity. They found that some foods were more frequently allergenic than others. Wheat, salmon, corn meal, and horse meat varied from highest to lowest incidence, respectively, among the foods producing allergy. Angioneurotic edema of food origin was ascertained as early as 1922.⁴

No reference to a specific allergen or food-producing urticaria in the dog was found in the literature available to us. Hemorrhagic colitis related to intestinal allergy could not be found in the literature relating to any animal. We, therefore, find it desirable to report on the following 8 cases which resulted in urticaria or hemorrhagic colitis.

Three cases of urticaria are listed below. In 2 of these, eggs were established as the causative agent by elimination experiments. In the third case, it appeared that the supersensitivity was caused by a commercial, baked dog food.

Case 1.—A 7-month-old English Bulldog, male, showed severe urticaria. The history revealed that he had been fed eggs and milk every morning. After adrenalin was administered, prompt relief resulted. The animal was sent home, and two hours later the owner reported that they had neglected to remove the remaining egg and milk which had been fed that morning. The dog had finished its meal as soon as they arrived home, and the urticaria reappeared. The dog was returned to the hospital, treated again with adrenalin, and the

client instructed to eliminate eggs from the diet. When milk alone was fed in the morning, there was no recurrence.

Case 2.—A 5-year-old mongrel, female, showed severe swelling of the face and large wheals all over the body accompanied by a severe pruritus. The symptoms appeared two hours after the noon feeding. The ration consisted primarily of meat and dry meal. However, custard left over from a child's lunch was often given to the dog. This occurred the day the dog was seen. After elimination of the custard (consisting of eggs and milk) from the ration, there was no recurrence. We assumed that the egg contained the allergen as the dog has continued to drink milk in the morning with no further urticarial complications.

Case 3.—A 3-month-old Boxer, male, showing urticaria, had a history of developing the symptoms about one hour after feeding. He was fed kibbles and meat. Adrenalin relieved the condition. The client was instructed to remove the kibble from the diet. Since this was done, there has been no recurrence.

In addition to these cases, we have seen 5 cases of hemorrhagic colitis, 1 of them fatal. Clinical cures were obtained in 3 cases by the removal of horse meat from the diet and in a fourth one by removing the kibble. The fifth animal died before the *materia peccans* could be ascertained but, in this one, an autopsy revealed the lesion involved.

Case 4.—An 8-year-old Gordon Setter, male, developed a severe hemorrhagic colitis. The dog had a persistent chronic eczema which we were never able to clear up completely during a period of four years. The animal's diet consisted of cooked horse meat, dry meal, milk, and vegetables. Stools consisted mostly of bright blood, and the bowel movements were frequent. Saline and dextrose were administered subcutaneously in large quantities, and the animal was permitted to rest. The bloody diarrhea stopped within eighteen hours. For the following three days, the dog was fed milk and pabulum only. On the fourth day, when a small amount of cooked horse meat was added to the diet, the cage was splattered within two hours with a very loose stool containing bright red blood. The diarrhea persisted for a

Read for the author by A. J. Well of Pearl River, N. Y., at the annual meeting of the College of Allergists, San Francisco, June 28-30, 1946. An abstract appeared in the *Annals of Allergy*.

The aid given us in the organization of the material in this paper, by Drs. Lester Reddin, Jr., A. E. Coca, and A. J. Well, is acknowledged.

few hours and then stopped. After horse meat was withdrawn, no further symptoms of colitis were seen. Incidentally, for the first time, the eczema showed great improvement.

Case 5.—A 2-year-old mongrel, male, was brought in with a history of two acute streptococcal infections. Six months later the animal showed symptoms of nephritis. Another attack of nephritis caused the dog to be hospitalized. During the period of hospitalization, cooked horse meat and dry meal was fed. The dog ate it, though the owner had reported that the dog refused cooked horse meat at home. On recovering from this attack and being discharged, he was fed the same diet as that received at the hospital. Soon afterwards, he developed a bloody diarrhea following an evening meal. The diarrhea persisted for several hours and then subsided. The removal of the cooked horse meat brought about apparent recovery. However, when a small amount of cooked horse meat was added to the diet several days later, there was a recurrence of the diarrhea. No more horse meat has been fed, and the animal has not suffered from this disturbance again.

Case 6.—A 5-year-old Airedale, male, suffered from a sudden bloody diarrhea with the elimination of large pools of blood. A transfusion of 150 cc. of whole blood was administered. The stool examination revealed a moderate hookworm infection. Several days on a bland diet brought sufficient recovery to permit worm treatment. After the treatment, the dog was given a cooked horse meat and dry meal diet and sent home several days later. At home, the ration consisted of milk, vegetables, cooked horse meat, and the kibble. The diarrhea soon recurred, though no further signs of hookworms could be found. Horse meat was removed from the diet, and the condition was eliminated. Several weeks later, the owner reported that when horse meat was again fed, the diarrhea returned. Horse meat was permanently removed from the ration.

Case 7.—A Cocker Spaniel brought to the hospital showed severe circulatory collapse following acute diarrhea and the passage of large amounts of blood. The ration included a commercial dog biscuit, which was later found to be the cause of convulsions in 16 other dogs in the same kennel. Cooked horse meat was also part of the ration. Treatment consisted of a blood transfusion which produced prompt improvement. By late afternoon, the dog begged for food and had a normal stool. Since the kibbled food was removed from the ration, the dog has remained well.

Case 8.—A 4-year-old Cocker Spaniel was brought for an autopsy. The dog had been on the show circuit and was kept at the handler's kennel. The owner had seen the dog the day before he died, and he appeared to be well. The diet was beef and kibble. The following morning, the handler informed the owner that the dog was in a state of collapse in the kennel. Large quantities of blood had been lost from hemorrhagic diarrhea. A nearby veterinarian had treated the dog symptomatically. The owner saw the animal in the afternoon. The dog, still hemorrhaging, died late that afternoon. No blood transfusion was given.

The autopsy revealed a severely hemorrhagic colon. The hemorrhagic area extended from the ileocecal valve to the rectum. Macroscopically, the mucosa seemed unaffected as it was smooth and glistening. The hemorrhage apparently had its origin in the submucosa. Small thrombi were present in the mesenteric veins, and whipworms were found in the cecum.

Microscopic examination revealed extensive granular necrosis with interstitial hemorrhage of the submucosa of the colon. The mucosa was diffusely infiltrated with polymorphonuclear leucocytes. The blood vessels in the region were greatly distended and congested. One of the arteries was plugged by the organized mass of a blood clot, and this was extensively infiltrated with polymorphonuclear leucocytes. On the basis of the macro- and microscopic examination, the diagnosis of acute colitis with hemorrhage and thrombosis of blood vessels in the region was made.

DISCUSSION AND CONCLUSIONS

Schnelle⁵ claims that any defect in the wall of the intestinal tract removes the normal barrier against the passage of allergens into the blood and may be a predisposing factor in the development of an allergy. In cases 6 and 8, we have a history of worm infections which may have some significance if Schnelle's assumptions are correct. Most of the dogs did not have any detectable worm infection at the time they displayed their allergic symptoms, but previous damage from one cause or another cannot be ruled out.

Hemorrhagic colitis has been seen frequently and has been ascribed to various causes. In the cases discussed above, the condition was peculiar in that it appeared and disappeared rapidly. Blood transfusions generally saved the animals, while those not treated in this way rarely recovered.

The last case reported showed lesions very different from those occurring in an infectious disease. Thus, it appeared that we were dealing with a toxic or allergic condition. It is not possible for us to present proof positive of the allergic nature of any of these conditions. The prompt improvement (case 4) of the skin in an intractable eczema, following correction of the diet, is possibly indicative. In general, the history is so unique, and the recurrence after the reintroduction of the causative agent so suggestive, that we offer this report in an attempt to stimulate further study of these conditions on an allergic basis.

SUMMARY

Three cases of urticaria in the dog are

described. Two are believed due to eggs and 1 to kibble.

Five cases of hemorrhagic colitis are described. Three cases are believed to be due to cooked horse meat and 1 to kibbles. The last case died before the cause could be determined. Investigational work on allergic conditions is suggested.

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Rickets Due to Improper Calcium-Phosphorus Balance

On Apr. 22, 1946, a 3-month-old female Airedale was admitted to the hospital with a large, fluctuating swelling on each elbow. These enlargements had been present about twelve days. One of them had been lanced in an unsuccessful attempt to relieve the trouble.

The owner had obtained the dog from a kennel several weeks earlier and did not know what had been fed. Since he had owned the pup, it was fed half meat and half commercial dog meal. The dog felt well, had a good appetite, and showed no malformation other than the trouble in the elbows.

We drew 15 cc. of blood for chemical analysis and made x-ray plates. The analysis showed that the blood calcium was only 2.22 mg./100 cc. of whole blood, and blood phosphorus was 8.0 mg./100 cc. These are in contrast to the normal levels of 9 to 11 mg. and 2.2 to 4 mg. of calcium and phosphorus, respectively, the calcium level being very low (only 2.22 rather than 9 to 11 mg.) while the phosphorus level was correspondingly high (8 rather than 2.2 to 4 mg.). The x-ray plates revealed an unusually small degree of ossification in the epiphyses of the humerus, radius, and ulna. A portion of the olecranon was completely detached from the ulna and was acting as an irritant, moving back and forth at each movement of the elbow and causing a thickening of the soft tissues of the elbow and the formation of serous sacs.

The animal was given 40 mg. of calcium pantothenate intramuscularly once daily

and 4 drops of Drisdol (crystalline vitamin D₂ in propylene glycol), which equalled 1,000 U.S.P. units of vitamin D daily. The latter was given in milk or water. The ration consisted of one third dog manna (a wheat product) and two thirds cooked beef, with additional milk when available. This treatment was continued for seven days. At the end of this time, the enlargements on both elbows had disappeared almost entirely, and crepitation of the olecranon could no longer be felt. The patient remained in the clinic for another week, during which time 20 gr. of calcium gluconate were given daily, *per os*, and the ration remained the same. The patient was then discharged, the elbows showing no abnormality. It was advised that the calcium gluconate tablets be continued for at least two weeks and that the ration of meal and meat be continued, with the addition of 1 teaspoonful of cod liver oil daily.

On June 10, 1946, a blood analysis showed calcium 8.75 and phosphorus 7.34 mg./100 cc. of whole blood, respectively. Fluoroscopic examination revealed great improvement in calcification. The dog appeared normal in all outward respects.

On July 20, 1946, final x-ray plates showed almost normal bone development for a dog of that age.—*Virginia Streets, D.V.M., Pullman, Wash.*

The Growth-Promoting Factor of Summer Butter

Early American farmers, emigrants of the European dairy regions, habitually salted down early spring butter for future use, on the ground that it had superior nutritive properties. Recent research work carried out in Holland by chemists of the University of Amsterdam* now attributes the superiority of summer butter to the high concentration of unsaponifiable vaccenic acid which is separable from the other fatty acids of butter. By the distillation of methylesters of the fatty acids of summer butter, the fraction containing 18 carbon atoms appeared to be the growth-promoting one. Vaccenic acid is found in Chinese wood oil, but the highest concentration is contained in summer butterfat. Its high concentration in summer butter is said to account for the superiority of summer over winter butter.

*Holland correspondence to the *J.Am.M.A.*, 133, (Apr. 26, 1947): 1299.

Nutrition Notes

Birdsfoot trefoil is excellent pasture for breeding ewes, according to a note in *The California Wool Grower* (Oct. 20, 1946).

Green, leafy vegetables with a high oxalic acid content are poor dietary sources of calcium.

In dogs, low-fat diets frequently predispose to dry, poorly nourished coats, falling hair, scratching, and poor clinical condition.—*Dr. M. L. Morris in Vet. Student (Winter, 1947)*.

Pups of mothers having nutritional deficiencies characterized by both hemoglobin and erythroblastic anemias should be weaned to solid food containing high quality protein and liver at the earliest possible moment.—*Dr. M. L. Morris in Vet. Student (Winter, 1947)*.

Linseed Cake as Hog Feed.—Experiments conducted in Uruguay showed that linseed cake can be fed safely to swine up to 20 per cent of the ration. Larger percentages produced intoxication and poor-quality fat.

North American flour, says a reporter of Continental Europe, is the cause of canine hysteria—running fits—since countries that do not import North American flour do not see that common canine ailment. Bleaching flour with nitrogen chloride (agenized flour) is blamed.

Impure Calcite Improves Hatchability.—The calcite product that goes into the ration of laying hens has a marked influence on hatchability, according to tests made by Lillie and Thompson at the New Jersey station (*Poultry Sci.*, 26, May, 1947: 223-228). Average hatchability of fertile eggs was considerably higher when hens were fed impure, rather than a relatively pure, calcite, possibly because the former supplies certain chemical elements not present in the pure product.

M. H. Roepke (University of Minnesota) says: Half a gallon of colostrum contains as much calcium as all of the soft tissues of the cow's body.

Fish products appear to be more effective than meat scrap in supplementing poultry rations containing soybean oil meal.

The quality of pasture is almost as important in keeping cattle where they belong as is the durability of the fence.

Calves require more vitamin A in cold weather than in warm weather. This may be another explanation for calf trouble in February.

Hens will produce market eggs on one-fourth the riboflavin that is required to produce eggs of good hatchability.

When corn is a major part of the ration for weanling pigs, nicotinic acid deficiency usually occurs, even though the percentage of protein is high.—*J. Nutr.*, March 10, 1947:258.

Contrary to former beliefs, it was agreed at the Cornell Nutrition Conference that newborn calves were able to utilize carotene to fulfill their needs of vitamin A, at least in the case of the Holstein-Friesian. The amount required to sustain growth was given as 6 mg. per 100 lb. of body weight, compared with 15 mg. for older animals, to prevent night blindness.

Dried Penicillin Mycelium in Chick Feeding.—Dried penicillin mycelium is a good natural source of riboflavin, niacin, pantothenic acid, biotin, and folic acid, but it is apparently low in thiamin and pyridoxine. Tests made by Newell, Peterson, and Elvehjem at the University of Wisconsin (*Poultry Sci.*, 26, May, 1947: 284-288) showed that this product is a satisfactory supplement to soybean oil meal in chick rations. Best growth responses were obtained when the basal ration contained fish press water in addition to the mold mycelium.

EDITORIAL

The Value of the Necropsy in Veterinary Medicine

One need not be a follower of a spiritualistic cult to appreciate the saying: "A necropsy is a message of wisdom from the dead to the living." Postmortem examination is a valuable diagnostic technique. We realize this the more as we use it intelligently. For the necropsy may be, in fact, the sole answer to the question: "Why did the animal die?"

Accurate *diagnosis* is a necessary forerunner to the effective *control* of animal diseases. Diagnosis in turn depends upon knowledge from one or more basic sources of information, namely, history, symptoms, necropsy findings, and laboratory tests.

The history alone may be of considerable value, but rarely can it be relied upon without combining its findings with those obtained by one or more of the other diagnostic methods.

The symptoms alone may suffice and, when combined with history, the prospect of diagnosis is greatly increased. These two factors are probably used more than any other diagnostic methods in the field of veterinary medicine today. But they, too, may be inconclusive; hence some other approach to diagnosis becomes necessary.

The laboratory, with its attractive apparatus, may hold the answer to many diagnostic quests. That it may fail appears to surprise some; but fail it will if too high a value is placed upon its techniques. Laboratory tests never have been, nor will they ever be, substitutes for keen clinical observation, or for the ability to delve into the animal's past. Combined with a knowledge of history and symptoms, the laboratory is a powerful supporting agency and should be so used.

What about the necropsy as a factor in diagnosis? Here again, its intelligent use alone may hold the answer. Of course, what the necropsy actually accomplishes is

to bring into the open previously unseen or merely surmised lesions, and even certain etiologic agents not observable from the animal's exterior. But it may do more than that. Quite frequently, the necropsy may be compared to opening and reading a book, the title of which conveys a certain meaning; but it is the text that really portrays the plot, the sequence of events, and the conclusions. The man of medicine who does not perform necropsies is quite like the collector who values books for their decorative appearance on shelves rather than for what they contain of enlightenment. The necropsy, like the text of a book, may reveal items of a surprising or unexpected nature, thus explaining previously unknown or baffling events.

The veterinarian holds a distinct advantage over the physician in the matter of postmortem diagnosis. He, the veterinarian, may employ euthanasia in order to sample, as it were, the pathologic status of a herd or flock, thus hastening the process of diagnosis. Seldom does the owner object to such procedure; in fact, the skillful performance of a necropsy usually raises the prestige of the veterinarian in the eyes of his client.

The orderly and systematic inspection of the dead reached a peak through the efforts of Karl Rokitsky (1804-1878), head of the Department of Pathology, University of Vienna. From 1827 to 1866, he examined over 30,000 human cadavers; and he recorded his findings in longhand, a task probably unequalled. His methods have been improved but little and, with certain modifications, they are in use today by well-trained veterinarians.

In no modern college of veterinary medicine would surgical instruction be considered as complete without a course in operative surgery. Surgical skills cannot be effectively used unless they are practiced. This fact is also true for the field of pathology. The basic courses in general

Head of the Department of Veterinary Pathology, Iowa State College, Ames, Iowa.

Editorial prepared at the request of the Committee on the Registry of Veterinary Pathology.

and special pathology only reach consummation when they are followed by post-mortem practice. Here the student sees, feels, and even smells those tissue and fluid alterations which he has been taught to expect in the diseased animal.

In order to reap full benefit from post-mortem pathology, the student must be an active participant in exposing the organs of the cadaver. Under the guidance of a skilled instructor, a small group of students will thus receive a stimulating and informative knowledge of pathology. Discernment in all clinical techniques will be sharpened by such experience. This is especially true if the student has an opportunity to examine at necropsy the animals which failed to recover that have been under his care in the hospital.

Final links in the chain of pathogenesis are forged if the necropsy is followed by the preparation of tissue sections, bacteriologic cultures, chemical tests, parasite identifications, and such other procedures as may be necessary. Next to the recovery of the patient, this is the most important result of clinical instruction.

The postmortem laboratory itself should be roomy, orderly, and clean; it should be well-lighted, properly ventilated, and suitably equipped. It should attract, not repel. Aside from instruction in systematic technique, the student should learn to keep reasonably neat and to protect himself and living animal patients from transmissible disease agents. Proper clothing, footwear, gloves, and decontamination aids should be as routinely used as they are in a surgical laboratory. The recording of postmortem findings is also essential.

The veterinary practitioner needs but little space for the conduct of necropsies. In large animal practice, he should choose an outdoor area least likely to allow contamination to spread. In small animal practice, a well-ventilated room of the hospital may be set aside for conducting euthanasia and for necropsies.

Fewer and less bulky specimens need be submitted to diagnostic laboratories if carefully conducted postmortem examinations are performed by practitioners; also, much time may be saved in arriving at a diagnosis.

Necropsy instruments need be neither numerous nor costly. Quality, especially in knives and scissors, is important. Dull

instruments are a considerable source of discouragement to the operator.

Veterinarians who make a practice of conducting and recording necropsies on all but the more easily diagnosed patients will accumulate experience and data of great value for themselves as well as for transmission to other members of the medical professions.

Marcello Donato, an Italian physician, had this to say in 1586 regarding necropsies: "Let those who prevent the opening of bodies well understand their errors. When the cause of a disease is obscure . . . they cause a grave damage to the rest of mankind; for they prevent the physician from acquiring a knowledge which may afford the means of great relief eventually to individuals attacked by a similar disease. No less blame is applicable to those physicians who, from laziness or repugnance, love better to remain in the darkness of ignorance than to scrutinize laboriously the truth. . . ."

s/E. A. BENBROOK

Mistaken Economy?

In removing some \$6,000,000 from the budget of the Bureau of Animal Industry for the costs of its Meat Inspection Division for the next fiscal year and providing that these costs be transferred to the packers operating under federal supervision (see "U. S. Government" news in this issue), the House of Representatives has again raised the question of who should pay for services of this kind. When meat inspection was first established in the late nineties, this same question arose and it was finally decided that the federal government should provide the funds. Since that time, the meat inspection service has been administered as an agency primarily for the protection of public health and welfare, has been supported by public funds, and thus, has been financially independent of the industry it polices in the public interest.

To change this status now, after more than forty years, during which time federal meat inspection has made a splendid record, gaining the confidence of the people and the industry, involves a principle which deserves most careful study before final action is taken. Granting the need for

economy in government, it can be seriously questioned whether an inspection service which is mandatory for all meat moving in interstate commerce should be paid for by the industry affected or by the public which is benefited. Some have argued that all the people should not be taxed for a service that benefits only part of the people, since only about 75 per cent of the meat processed in the United States is under federal inspection. Dollar-wise, however, the amount of money involved for the meat inspection service (\$11,140,000 in the budget for the next fiscal year) is infinitesimal when assessed against the tax-paying citizens of this country, as compared to its values as a public health measure.

We believe that the House Committee on agricultural appropriations erred in its attempt to justify the radical proposal when it compared meat inspection to other inspection services of the Department of Agriculture, such as for sea food and poultry, which are paid for by the packers. The latter inspection is a purely *voluntary* or *permissive* undertaking whereas federal meat inspection is *mandatory* for all meat moving in interstate commerce.

In our judgment, the best interests of public welfare are not served by an economy measure which may in any way adversely affect or compromise the independence and efficiency of services rendered by such agencies as the Meat Inspection Division.

The Economics of Veterinary Medicine

In the veterinary literature over the dam since time out of mind, there is little evidence that our branch of the biological sciences has ever made much of an effort to underpin itself with knowledge of agriculture *per se*. Although farming is the basic structure of our work and, from cellar to flag pole, the house in which we live, we've heard complaints about giving space to articles, squibs, and news items touching upon crops, acreage, farm practices, soil erosion, fertilization, phytopathology and therapy, applied botany and economic entomology, capital investment and earnings, and the relation of these to human affairs, much as if none of that sort of learning is any of our business.

On the contrary, it is timely to bone up on the science and the art of farming (which includes animal production) and thus become capable veterinarians, not in the mere sense of curing the sick but, more particularly, for the current and future benefit of mankind. That can seem grandiose only to the thoughtless. Man is a wonderful creation and all that but still he can't eat the cake and have it. There must be established a proper balance between the plant and animal life the soil can maintain on the long run; and there is no branch of applied knowledge more specially capable of doing that than veterinary science, provided its sponsors and practitioners will but admit that their keystone and substructure is farming. That conceded in our uplifting program, the plot only thickens for the reason that in the regimentation of plant as well as animal production, through health, lies the fundamental obligation of veterinary medicine. That is to say, improving the arable land and the grasslands in order to produce more livestock only postpones the evil hour if not intelligently pursued and regulated. Farming is not extra-curricular unless, in the future as in the past, we choose to remain unconscious of the reason for our existence as a profession. Such knowledge is pragmatic, not academic only.



—Associated Serum Producers

CURRENT LITERATURE

ABSTRACTS

Immunity to Avian Lymphoid Tumors

Immunity was demonstrated in survivors of implants of a lymphoid tumor strain, and this immunity was tested in experiments involving 592 chickens. Many chickens inoculated with frozen tumor cells or cell-free tumor extracts did not develop osteopetrosis or lymphomatous tumors of the viscera, and yet a high percentage of these survivors was found to be immune to implants of highly active cell suspensions. The longest period tested was eighty-nine days.—[B. R. Burmester and T. C. Belding: *Immunity and Cross Immunity Reactions Obtained with Several Avian Lymphoid Tumor Strains*. *Am. J. Vet. Res.*, 8, (Jan., 1947): 128-133.]

Hog Cholera Immunization

It is probable that a new strain of hog cholera virus was introduced into North Africa by feeding pork scraps in garbage from American troops. Shortly after the Allied armies invaded North Africa severe outbreaks of hog cholera appeared in Morocco, Algeria, and Tunisia. The disease followed the course of the armies in Corsica and Italy. Outbreaks occurred in France following the feeding of garbage from American camps in spite of warnings in the press that the practice was dangerous. The virus used in the preparation of hog cholera antiserum was isolated in Morocco in February, 1943. Swine were hyperimmunized in five steps:

- 1) Each animal was given 2 cc. of antiserum per kilogram of body weight and 1 cc. of virulent blood diluted 20 times.
- 2) After twenty to twenty-five days 1 cc. of virulent blood was given.
- 3) Fifteen days later, 10 cc. of virulent blood was injected followed by
- 4) A similar injection after another fifteen days.
- 5) Two weeks after the fourth injection of virulent blood, each animal was given 200 cc. of virulent blood intraperitoneally and three subcutaneous injections of 20 cc. each of tissue suspensions (spleen, kidney, and lymph nodes) from infected swine that furnished the virulent blood.

Two weeks after the last treatment with virus the animals were exsanguinated. The blood was defibrinated and the serum collected by centrifugation. Phenol was added to a concentration of 0.5 per cent. Certain of the hyperimmunized animals were found to have marked congestion of the gastric mucosa, and it was thought that the virus may have localized there. Suspensions of the congested mucosa

were inoculated into susceptible animals, but it was not possible to demonstrate either the presence of virus or protecting antibodies in the affected mucosa.—[A. Donatien, E. I. M. Plantureux, L. Rampon, and E. G. Gayot: *L'immunization contre la peste porcine*. (Immunization against Hog Cholera). *Arch. Inst. Pasteur, Algerie*, 24, (1946): 87-103, 12 fig.]

A. G. KARLSON

Comparisons of Poultry Disease Viruses

Evaluations of pH stability were made on one English strain of Newcastle disease (avian pneumoencephalitis) virus, three California strains of pneumoencephalitis virus, and a Dutch East Indies strain of fowl plague virus. There was a close relationship in pH stability among the English and California strains, but a distinct difference between these strains for the fowl plague virus. The pH-stability patterns were similar for the fowl plague virus and a variant virus of low virulence derived from it.—[H. E. Moses, C. A. Brandly, and E. Elizabeth Jones: *The pH Stability of Viruses of Newcastle Disease and Fowl Plague*. *Science*, 105, (May 2, 1947): 477-479.]

Hemolytic Streptococci

The difficulty of classifying streptococci has hampered etiologic and epizootologic studies of animal diseases. The use of the Lancefield-Griffith method, however, has proved of value in this respect. Most of the streptococci of animal origin are in groups B and C. Subgroup Ce is represented by *Streptococcus equi*, the cause of strangles. It is markedly hemolytic and produces a soluble hemolysin. A toxin is produced that can be neutralized by antiserum. *Str. equi* is distinct in that it fails to ferment lactose. It is nonpathogenic for man but has been reported a few times as causing mastitis in cattle. It has been isolated from abscesses in kidneys of foxes and mink presumably as the result of feeding meat from horses with strangles. Subgroup Ca contains the hemolytic *Streptococcus pyogenes animalis* which, in horses, plays as important a rôle as the group A streptococci in man. Subgroup Ca may be broken down into different serologic types. It differs from subgroup Ce in fermenting lactose and from group B in being unable to ferment trehalose. It is a common cause of serious secondary infection in virus diseases and of septicemias and pyemias in foals. It is a common cause of metritis and mastitis in cattle, pneumonia and pyoderma of pigs, and septicemia of such animals as guinea pigs, dogs,

fox, and fowl. *Str. pyogenes animalis* (subgroup Ca) is ordinarily not pathogenic for man, but there have been accidental infections caused by massive doses. In some instances, veterinarians have accidentally inoculated themselves in the finger when using vaccines containing live microorganisms resulting in a local abscess and severe lymphangitis. Tonsillitis and purulent rhinitis were seen in a laboratory worker who accidentally pipetted some broth culture into his mouth. Milk from cattle with mastitis due to subgroup Ca streptococci may cause infection in calves.

Mastitis is the most common streptococcal infection of cattle and is widespread in Sweden. These microorganisms are classified into Minetti's groups I, II, and III which are *Streptococcus agalactiae* (Lancefield group B), *Streptococcus dysgalactiae*, and *Streptococcus uberis*, respectively. These are nonpathogenic for man. Streptococci of Lancefield groups Ch and A have been found as the cause of sporadic cases of mastitis in cattle and are important because they are able to produce disease in man. Milk-borne epidemics of group A infection in man have been described in various countries. Cattle become infected with group A streptococci from human carriers. As a result of the mastitis that may develop, the milk becomes heavily laden with the microorganisms which are then transmitted to the consumers. Several epidemics of milk-borne infections traced to cases of mastitis in cattle are described. This is an excellent review of the streptococci, but no references are given.—[H. Hedstrom: *De hemolytiska streptokockernas betydelse inom human- och veterinärmedicin. (The Importance of Hemolytic Streptococci in Human and Veterinary Medicine.) Finsk Vet.-tidskr., 51, (1945): 103-112.*]

A. G. KARLSON

Tuberculin Reactions in Horses

Thirty-six horses were tested intradermally with avian and mammalian tuberculin and also with veal broth similar to that used in the preparation of the tuberculin. Twenty-six reacted to all three reagents, 7 reacted to both types of tuberculin but not to the veal broth, 2 animals had reactions to avian tuberculin and veal broth, and 2 others reacted to the mammalian tuberculin and veal broth. The reactions appeared to be greatest after forty-eight hours, but they were still readily seen after seventy-two hours. The reaction to avian tuberculin was usually less pronounced than to the mammalian product which was a mixture of 2/3 bovine and 1/3 human type of tuberculin. No avian or bovine cases of tuberculosis could be found on the farms where these horses originated. Human sources of infection were considered improbable. In a second series of tests, 100 horses were tested with mammalian tuberculin and veal broth. There were no reactions to the broth, but 33 reacted to the tuberculin. A third group consisting of 101 animals was tested with tuberculin made from synthetic medium and, of these, 45

reacted. The sensitivity to tuberculin is not due to avian, bovine, or human tubercle bacilli but probably due to sensitization by other acidfast bacteria. The tuberculin test cannot be used in horses because of the high percentage that will show this group reaction.—[R. Stenius: *Tuberculin Reactions in Horses. (In Swedish.) Finsk. Vet.-tidskr., 51, (1945): 1-16.*]

A. G. KARLSON

Adsorbate Newcastle Disease [Pneumoencephalitis] Vaccine

Virus attenuation by chemical treatment produced a highly potent Newcastle disease vaccine, of which 75,000 doses have been used in the field. Passage through chicken embryos, aging in phosphate buffers, and desiccation proved ineffective in developing a potent vaccine from Newcastle disease virus. Chemical treatment, using alumina cream as an adsorbent and emulsifier and formalin as an attenuating agent, proved to be the most effective method of producing a highly potent Newcastle disease vaccine.

Injecting one, two, or more doses of adsorbate vaccine, followed with 40 to 1,000 m.l.d.'s of the virus, conferred an almost solid protection against natural infection.—[A. B. Coronel: *Adsorbate Newcastle Disease (Avian Pest) Vaccine. Am. J. Vet. Res., 8, (Jan., 1947): 120-127.*]

Focal Hepatitis in Cattle

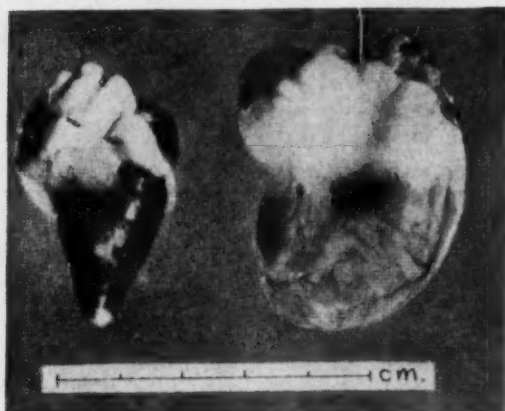
The meat-packing industry has sustained a heavy loss for years because of the condemnation of bovine livers affected with telangiectasis and "sawdust." Evidence indicates that the affected livers begin first to show a focal hepatitis, and that sawdust and telang lesions merely represent different stages of this condition. Transitional stages were found in many sections prepared from 82 beef livers studied.

Both male and female animals may be equally affected. Early stages were noted in calves 6 months old; the majority of the involved livers were from carcasses classified as prime or choice, but a considerable number were from cutters and canners. Many livers classified as normal on gross examination exhibited sawdust and telang lesions in microscopic sections; hence, the classification at time of slaughter is merely arbitrary. All carcasses whose livers showed lesions of this type were passed for human food.

The etiology of the condition remains uncertain, but there appears to be a definite connection between ulcers of the rumen and abscesses of the liver. There was no constant relation between fatty deposit or glycogen deposit and the presence or absence of focal hepatitis. The possibility of an autointoxication by way of the portal venous system or the biliary system should be kept in mind.—[Robert Getty: *The Histopathology of a Focal Hepatitis and of its Termination ("Sawdust" and "Telang" Liver) in Cattle. Am. J. Vet. Res., 7, (Oct., 1946): 437-449.*]

Toxic Heart Degeneration in Fowl

The sudden death of chickens without previous sickness, observed by farmers of certain districts for several years, revealed, *post mortem*, enlarged hearts of pale, parboiled appearance; pericardial effusion; edema of parenchyma



—Australian Veterinary Journal
Normal (left) and affected heart from White Leg-horns of the same age.

matous organs and muscles; and venous engorgement. The pathognomonic lesion was the myocardial alteration. The findings did not agree with any known avian disease. The morbidity ranged from 11 to 36 per cent during the period of 1941-1946, in a total of 38 scattered outbreaks tabulated in the report. Mortality, practically 100 per cent.

Apparently healthy birds, at feeding time or after exertion, drop suddenly, flap their wings, and die in a few minutes. Mostly pullets were stricken, although some younger birds and adults were susceptible. The author attempts to compare the trouble with sudden syncope in sheep and pigs occasionally reported. Bacteriologic studies and feeding experiments were negative, hence the tentative term "toxic heart degeneration."—[W. G. Fishel, D.M.V., Animal Research Station, Wallaceville, N. Z.: "Enzoötic Fatal Syncope (Toxic Heart Degeneration) in Fowl?" *Austral. Vet. J.*, 22, (Oct., 1946): 144-149.]

Rheumatism in Horses

Although equine rheumatism is a systemic disease in which the earliest and most fundamental changes involve the heart and blood vessels, it is usually diagnosed by joint and muscle symptoms which appear in the later stages if at all. Exposure and a diet of acid-forming foods are precipitating factors, but the primary etiology is not established. (No mention is made of the human medical concept that the disease is a post-streptococcal hypersensitivity angitis. See Griffith, *J. Am. M. A.*, 133, (1947): 974.) The similarity between azoturia and rheumatism is illustrated by two examples where the incidence of both diseases was greatly increased by the same factors of

diet and exposure. The fact that cardiac changes occur in azoturia is cited as further evidence of the relationship.

In 37 cases in Army hospitals,* the author observed the usual locomotor symptoms, fever, endocarditis, myocarditis, and arteritis. Endocarditis was associated with murmurs, an accent on the first heart sound, and an augmented second sound at the pulmonary valves, indicating mitral insufficiency and pulmonary stasis. Myocarditis produced a deadening of the normal heart sounds, extrasystole, murmurs, and edema of the extremities. A rheumatic localization in the foot is described, the symptoms of which resemble those of laminitis.

Averages from the hemograms of 33 rheumatic horses are given: erythrocytes 6.9 mg.; total leucocytes 8,600; basophils 2 per cent; eosinophils 0.5 per cent; myelocytes 0; juveniles 0; unsegmented neutrophils 2 per cent; segmented neutrophils 59.5 per cent; lymphocytes 26 per cent; monocytes 10 per cent. The hemoglobin value was increased by the presence of myohemoglobin. Blood sugar was raised to 140 to 152 mg. per 100 cc. Urinalysis in early stages showed albumen, sugar, a rise of oxidized glutathione, and a fall of reduced glutathione.

Therapy consisted of a restriction of concentrates, elimination of acid-forming foods, and intravenous administration on successive days of:

- 1) 3 to 4 per cent sodium bicarbonate solution 200-300 cc.
- 2) 10 per cent sodium salicylate solution 100 cc.
- 3) 1 per cent methylene blue solution 100-150 cc.

The three-day series was repeated as indicated, and supported by symptomatic treatment.

—[I. P. Zapadnyuk: *Rheumatism in Horses. Veterinariya*, 8/9, (Aug.-Sept., 1946): 19-23.]

ROBERT E. HABEL

Brucella Transmission by Ectoparasites

Ticks, bedbugs, and fleas were susceptible to infection with *Brucella melitensis*, *Brucella abortus*, and *Brucella suis*, the latter being most infective. Fleas eliminated *Brucella* in the feces from the third day after the infective meal, bedbugs from the sixth day, and ticks from the tenth day. Ticks and bedbugs were still eliminating large numbers of *Brucella* in the feces after three months of observation.

Ticks were the only parasites found able to transmit infection by biting, and this was true only when they were not interrupted while feeding. Ticks were also able to transmit organisms to the eggs and larvae.

The isolation of one strain of *Br. abortus* from *Boophilus annulatus*, and two strains of *Br. melitensis* from *Cimex lectularius* collected in the field, is reported.—[Raul M. Tovar: *Infection and Transmission of Brucella by Ectoparasites. Am. J. Vet. Res.*, 8, (Jan., 1947): 138-140.]

*The geographical location of the military veterinary hospitals was not given.

BOOKS AND REPORTS

Intern's Manual

Veterinarians on the staff of the Angell Memorial Hospital, Boston, Mass., have prepared a booklet which presents and discusses the precedents which have been established at the hospital. This was done for the purpose of acquainting interns and new staff members with the "many rules, orders, commands, and resolves" which have "become precedents of practice accepted by all staff members."

The booklet discusses the record system of the hospital, the relationship between the several staff members, the relationship between staff members and clients, some of the drugs commonly used, and the usual treatment of some of the conditions frequently seen at the hospital.—[*Precedents of Angell Memorial Hospital, Boston, Mass. 18 pages, mimeograph. 1946.*]

Practical Bacteriologic Control of Food of Animal Origin (Title Translated)

The modern trend in the science and art of food hygiene is indicated by the title and contents of the all-inclusive manual just published by the assistant bacteriologist of the *Faculté de Médecine*, chief of the abattoir laboratories of metropolitan Paris, and auditor of the Superior Council of Public Hygiene of France. The volume covers fresh meats, meat products, milk, eggs, shell fish, and the technical details to be employed by a veterinary sanitary service on the line of duty. The author's background of experience in this type of public service and his scientific erudition are reflected throughout the chapters of this valuable addition to veterinary literature. From the standpoint of the microbian life involved, its counterpart in English is Jensen's *Microbiology of Meats*, The Garrard Press, 1942, which first drew our attention to the rôle of the bacteriologist in routine meat inspection. Professor Robert Debré of the Academy of Medicine writes a foreword which stresses the importance of superimposing rigorous laboratory methods to the inspector's visual glance and the step-by-step precision required to insure maximum results from food hygiene. The bacteriology of animal products goes far beyond the mere hunting for undesirable germs contained within the twenty-four hours after slaughter. The fact that aërobes and anaërobes in fresh and cooked meat are capable of transforming nutritive proteins to toxic amines is a hint as to the breadth of the subject. In short, the new conception removes meat inspection from the level of empiricism.

The material is divided into five parts: (1) bacteriologic technique, (2) the principal microbes found in food, (3) bacteriologic control of fresh meat, market meat, and preserved meat, (4) milk hygiene, (5) bacteriologic control of shell eggs and shell fish. An appendix deals with chemical and histologic studies of food and water supplies, together with special

apparatus employed in macroscopic and microscopic investigations.

This is an extremely valuable book to the veterinary and the public health circles of the United States owing to the energetic expansion of all branches of food supervision including the fish, shell-fish, egg, and poultry markets about which very little was ever published to guide the inspectors drawn into those fields. Attention is invited to the advisability of publishing an English edition.—[*Contrôle bactériologique pratique des denrées alimentaires d'origine animale. By Armand Nevet. 364 pages. Systematically illustrated. Five color plates. Editions Médicales Flammarion, 26 rue Racine, Paris 6, France. Price not given.*]

Physician's Handbook

A terse, but comprehensive, summary of diagnostic procedures and factual data which a physician must have at hand at all times, this handbook will prove equally valuable to the practising veterinarian. It is divided into two parts, the first of which is more directly useful to the veterinarian since it is almost a complete manual for routine laboratory diagnoses: urinalysis, hematology and blood chemistry, feces examination, semen staining, water and milk analysis, and bacteriologic culture and staining among a much longer list of items.

Part II deals with clinical procedures and facts, many of which can be adapted to use by the veterinarian. This is a compendium of facts, with drawings, graphs, and tables which do not all apply in the practice of veterinary medicine, but which will quickly solve many a knotty problem.—[*Physician's Handbook. By John Warkentin and Jack D. Lange. Fourth Edition. 282 pages, 4 by 6½ inches, Litho. Paper cover. 1946. University Medical Publishers, Chicago. Price \$1.50.*]

Infectious Catarrhal Fever of Dogs

A disease tentatively called infectious catarrhal fever has been widespread among dogs in England since June, 1946. Initial symptoms are a slight cough, inappetence, and sometimes diarrhea, followed by acute tonsillitis and pharyngitis, enlargement of cervical glands, congested conjunctiva, and catarrhal rhinitis. Temperature varies from 103 to 105 F., and respiration is rapid. In many cases, nervous symptoms, including epileptiform fits and chorea, develop within two to four weeks after apparent recovery.

Mixed infection antiserum coupled with a five-day course of sulfapyridine was used to treat established cases. Catarrhal symptoms usually disappeared within twelve days after treatment was begun. Penicillin, given twice daily in large doses early in the course of the disease, was not only ineffective but actually caused a rise in temperature.

Autopsy revealed profuse Beta hemolytic streptococcus infection in all cases, but there was no evidence of *Brucella bronchiseptica* or distemper.—[*R. S. Townson: Infectious Catarrhal Fever of Dogs. Vet. Rec., 59, (Apr. 26, 1947): 203.*]

Food and Health

Defining health as a quality of life that can be built to higher levels, the writer seeks to help people attain and maintain better health through a more judicious use of food.

The keynote of the book might well be, "Nutrition is everyone's adventure," since this work is obviously intended to show readers that it doesn't take a Houdini to draft life-giving nutrients into everyday meals. The author, whose language is straight and easy to understand, wisely avoids dissertations on the therapeutic indications for vitamins and the like. This he quite properly leaves to the family doctor.

In 24 chapters and six appendixes, the mechanism and practical application of nutrition is discussed,—from basic dietary and metabolic aspects through proteins and amino acids, minerals, vitamins, and the chief groups of foods. The appendixes are primarily tabular guides to meal planning, with special reference to caloric and other nutritive values of widely used foods.

This book, designed for popular reading, brings technical data within the scope of everyone at the family table. Too bad the author (or editor) didn't make better use of sub-headings to spotlight the various sections and important thoughts of each chapter. Where sub-headings are used, which is not often, they are dull and decidedly textbookish—remote from the adventurous concept of nutrition that was suggested in the opening chapter.—[*Food and Health*. By Henry C. Sherman. 290 pages. The Macmillan Company, New York, 1947. Price \$4.00.]

How to Make a Diagnosis

The author has focused his attention on the diagnosis of diseases of farm animals, has analyzed his observations, and in this book presents the fruits of his analysis. He devotes three times as much space to "on the spot" diagnosis as to laboratory procedures. This is as it should be, for the veterinary practitioner must depend upon his own observations to a much greater extent than upon laboratory tests.

Disease is defined as an injurious deviation from the normal, and diagnosis as the art of recognizing a disease and distinguishing it from other diseases. Diagnosis is the basis of the practice of veterinary medicine, and it is not enough that the practitioner consciously follow a definite diagnostic procedure; he must also do this in such a way that the client realizes that the patient is being subjected to inspection, palpation, percussion, auscultation, and such other observations as have a bearing on the case.

Here is a book which should be read by every busy practitioner. It will help him to realize the importance of making a careful diagnosis. We tell ourselves tritely that a diagnosis must be made before treatment, control measures, and prophylaxis can succeed; but we then proceed to impress the client with the "miracle

drugs," the "magic treatments," and the wonder-working antibiotic agents. Instead, veterinarians must first impress themselves with the importance of recognizing the differences between individual cases rather than the similarities. Only on the basis of recognizing the differences can the treatment of a veterinarian excel that of an untrained layman.

There is no magic in treatment, unless that treatment is based upon a correct diagnosis which was made after a careful general examination of the animal and a detailed examination of the organ systems. This book tells how and why to make diagnostic examinations, and how to interpret the observations made.—[*Diagnostic Methods in Veterinary Medicine*, second edition. By G. F. Boddie. 370 pages, illustrated. Cloth. Oliver and Boyd, Edinburgh, Scotland. 1946. Price 15/-net.]

English-Spanish Chemical and Medical Dictionary

Spanish translations are listed for more than 40,000 English words and terms that are important in medicine, veterinary medicine, dentistry, surgery, biochemistry, bacteriology, and related sciences. Among them are many relating to hormones, the sulfonamide drugs, the antibiotic agents, and laboratory equipment and apparatus. The dictionary is particularly valuable to translators and to others who require a knowledge of scientific terms in the Spanish language, and it serves them to an exceptional degree because it lists not only the Spanish equivalent of the English words but also a brief description which permits correct interpretation and proper usage.—[*English-Spanish Chemical and Medical Dictionary*. By Morris Goldberg. 692 pages. Cloth. 1947. McGraw-Hill Book Co. Inc., New York. Price \$10.00.]

Veterinary Anesthesia

The author discusses the several methods by which domestic animals may be anesthetized for relief of pain and for adequate restraint while being subjected to surgical procedures. He describes in detail the preparation of the operative field, the anesthetic of choice, the strength of the solution, the size of the dose, and then illustrates the site of injection and the direction of the needle; he even indicates the size of the needle which does the job most effectively and the area rendered insensitive.

The book is divided into parts on local, regional, and general anesthesia, with individual chapters for each species and often for variations of the larger classification. For example, general anesthesia is subdivided into inhalation of volatile substances and oral, rectal, intravenous, and intraperitoneal injection of the nonvolatile anesthetics; each of these in turn, is divided into groups of animals which react similarly.—[*Veterinary Anaesthesia*. By John G. Wright. 218 pages, 5½ by 8 inches. 62 illustrations. Second Edition, 1946. Printed in Great Britain. Alexander Eger, Inc., Chicago. Price \$4.75.]

THE NEWS

Executive Board Elections in Districts I and IX

Nominating elections were completed on May 21, 1947, for candidates for full five-year terms in District I (Dominion of Canada) and District IX (the New England states and New York). Dr. E. R. Maschgan of Chicago tallied the votes and certified the following nominees whose names appeared on election ballots mailed to all members in the two districts on June 10, 1947.

District I.—Dr. A. E. Cameron (incumbent), Ottawa, Ont.; Dr. T. Childs, Ottawa; Dr. H. S. MacDonald, Toronto; Dr. Andrew S. MacNabb, Guelph; Dr. R. A. McIntosh, Guelph; and Dr. F. W. B. Smith, Vancouver, B. C. A tie for one place resulted in the listing of seven nominees in this district instead of the usual five.

District IX.—Dr. A. G. Danks, Ithaca, N. Y.; Dr. M. G. Fincher, Ithaca; Dr. B. S. Killian, Somerville, Mass.; Dr. Edwin Laitinen, West Hartford, Conn.; and Dr. C. P. Zepp (incumbent), New York, N. Y.

The election polls in these districts will close on Aug. 10, 1947, and the successful candidates will take office at the conclusion of the annual meeting next August.

A New National Veterinary Society

A new national association of veterinarians was launched into being June 7, when 17 veterinary inspectors on duty in the Chicago eviscerated poultry plants met at a dinner session and founded the Veterinary Society of Food Sanitarians. Temporary officers charged with the writing of a constitution and by-laws and incorporating the organization under the laws of Illinois were elected. In attendance were:

L. L. Beck	A. R. Kincaid
L. A. Blank	E. M. Lynn
R. W. Carmack	T. E. Sanders
W. N. Cochran	J. L. Thompson
L. V. Cowton	C. D. Tofflemire
P. T. Fehrenbacher	W. G. Trostle
T. W. Hobbs	J. W. Woods
A. A. Hoylman	A. D. Woodruff
B. C. Hunt	

The officers chosen to complete the organization and submit its basic laws for approval by the potential membership were:

E. M. Lynn, president
A. R. Kincaid, vice-president
J. W. Woods, secretary-treasurer

Invited guests who participated, in an advisory capacity, on the principal steps in-

volved in the founding of such a society and its objectives were Col. L. L. Shook, V.C., U. S. Army, John G. Hardenbergh, executive secretary of the AVMA, and L. A. Merillat, editor-in-chief of the JOURNALS of the American Veterinary Medical Association.

Dog Week Research Award

Mr. C. M. Olson, president of National Dog Week, announced an annual \$2,000 research award for the person or persons who contribute most to the welfare of dogs through research. At the organization's twentieth anniversary banquet held in New York on May 6, Mr. Olson stated that the rules for the award will take into consideration the fact that research undertaken for the advancement of human welfare often is significant from the standpoint of dog welfare.

Among the fields in which it is hoped that research can be carried on are: rabies elimination through development of an efficient vaccine; canine distemper control with special reference to nervous system sequels; nonparasitic skin diseases; eradication and curative procedure for demodectic or red mange; prevention and curative treatment of leptospirosis; development of an efficient and safe parasiticide for whipworm; endocrine dysfunctions; and blood pathologies, anemia, leucemia, and leucemoid condition.

Priestley Lectures for 1946 Available

Printed copies of the twentieth annual Priestley lectures are now available at \$2 per copy, and may be obtained upon application to Mr. Ray Dickison, Department of Chemistry, Pennsylvania State College, State College, Pa. The Pennsylvania chapter of Phi Lambda Upsilon, honorary chemical society, sponsors the Priestley series in cooperation with the Department of Chemistry.

Dr. Max A. Lauffer of the University of Pittsburgh delivered the twentieth series, May 20-24, 1946. The five topics discussed were: "Viruses as Molecules," "The Size and Shape of Viruses," "The Disintegration of Viruses," "Viruses as Organisms," and "Viruses and Human Welfare."

America's 'Most Useful Dog'

To center attention on the dog's utilitarian services to mankind, the Gaines Dog Research Center, New York City, has inaugurated a search for America's "most useful dog," which, along with its owner, will be honored during

(Continued on page 76)

Proposed Amendments to Constitution and Administrative By-Laws

At the 1946 meeting of the House of Representatives, action was deferred on one proposal which had been submitted at the 1945 business session. It had to do with integration of membership in the AVMA and its constituent associations. This proposal, plus two others which were submitted last year, will come up for final action at the Cincinnati session of the House; they are being published again for the information of delegates and other members, together with some additional proposals, and will be re-published in the May and June JOURNALS.

PROPOSAL No. 1

[The purpose of this proposal is to integrate membership in constituent associations (state, provincial, territorial, and other veterinary associations affiliated with the AVMA) with AVMA membership. If this purpose is to be effected, several changes are necessary in the Constitution and Administrative By-Laws. The proposal submitted at the 1945 business session and considered at the 1946 meeting has been revised to meet objections and clarify questions raised last year in the House of Representatives (see the JOURNAL, October, 1946, pp. 310-313). The words in italics are the suggested revisions.

Since the proposal as revised would affect the Constitution, it only can be submitted at the 1947 session and action taken one year thereafter.]

1) Amend Article III, Paragraph (b) of the Constitution to read:

"General Membership.—The general membership, otherwise known as the active membership, shall consist of (1) graduates of veterinary colleges approved by the Association who are members of their respective constituent associations and who have been duly elected in the manner hereinafter provided, and (2) associate members who have been duly elected as provided in paragraph (c) of this article; *provided, that the requirement of this paragraph with respect to membership in a constituent association shall not take effect until said constituent association shall have accepted the plan of integrated membership with the American Veterinary Medical Association by adopting the same qualifications for membership as prescribed in the by-laws and, provided further, that the requirement shall not then be retroactive but shall apply only to new applicants.*

"c. Associate Membership.—The associate membership shall consist of veterinarians duly elected in the manner provided by the by-laws who live in countries outside of the United States and the Dominion of Canada, and who are otherwise eligible but do not or could not hold membership in a constituent association."

Present paragraph (c) would become (d), and present paragraph (d) would become (e).

2) Amend Article IV, Section 1 of the Constitution to read:

"State, territorial, and provincial veterinary associations of North America, The National Association of Federal Veterinarians, and the official association of veterinarians of the United States Army which have or may hereafter become organized in conformity with the general plan of the American Veterinary Medical Association, and which have adopted the same qualifications for membership, shall be recognized upon application as constituent associations provided such application is approved by a majority vote of the Executive Board."

3) Amend Article X, Section 2(a) of the By-Laws as follows:

Drop the last sentence and replace with: "The application shall contain the certificate of the secretary of the constituent association that the applicant is a member in good standing of that body. *In the case of an application for associate membership, it shall contain the endorsement of two members who know the applicant, one or preferably both of whom shall live in the same country as the applicant.*

"The American Veterinary Medical Association reserves the right to reject the application of any member of any constituent association."

4) Add a new paragraph (b) to Section 3, Article X as follows:

"Members who have been dropped from constituent associations shall be dropped from the American Veterinary Medical Association on official notification by the secretary of the constituent association and shall be reinstated in the same manner. Whenever a member of this Association is dropped for any reason, the secretary of the constituent association in which he holds membership shall be notified promptly."

5) Replace Section 4 of Article X with the following:

"Section 4. The applications of candidates for associate membership shall be submitted to the Executive Board and shall be accepted or rejected by that body at any regular or special meeting. Associate members shall have all of the rights and privileges and be subjected to the same obligations as other active members except only that they are not required to maintain membership in a constituent association."

Present Section 4 would then become Section 5, and present Section 5 would become Section 6.

6) Amend Section 5 by making subparagraph (a) a part of re-numbered Section 5 and changing it to read as follows:

"Junior members who have maintained good standing in their respective junior chapters for three years prior to graduation may apply for membership at time of graduation without payment of the membership fee of \$5.00, provided their applications are endorsed by two members of the Association, and provided further that their continued membership is contingent upon their joining a constituent association within one year after graduation."

PROPOSAL No. 2

[The purpose of this proposal is to clarify the method of appointment of councils and committees so that this may be done by the Executive Board or other governing bodies of the Association, if desired. This proposal, and Proposal No. 3 below, were submitted to the House of Representatives at the 1946 session and will be in order for final action at the 1947 meeting.]

Amend the first part of Article XII—"Committees—Standing and Special" so that it will read as follows:

Article XII

Councils and Committees

"Section 1.—The councils and standing committees of the Association shall be those named below. Except as otherwise provided, the incoming president shall select and appoint the personnel of these councils and committees, in such numbers and for such terms as hereinafter specified. The selection of personnel for the ensuing year shall be made so that announcement of appointments and the rosters of councils and committees can be made in the proceedings (October) issue of the JOURNAL next following the annual meeting."

Section 2.—Special Committees: Transpose the present paragraph on special committees at the end of this article to this position.

Section 3.—This is to be the present second paragraph of Section 1, the first sentence of which is to be changed to read: "The annual report of the councils, standing and special committees," etc.

PROPOSAL No. 3

If the foregoing proposal is adopted, then subparagraph (c) of Section 3 of Article II should be amended to read:

"(c) except as hereinafter provided, he shall appoint all regular and special committees and shall promptly fill vacancies in the membership of committees created by any cause;"

PROPOSAL No. 4

[The purpose of this proposal is to include the Research Council and the Board of Trustees of the Research Fund in the organization set-up of the Association the same as are standing committees and the Council on Education. Since the proposed amendment is to the by-laws, and does not affect the corporate officers except to make some of them members of the Board of Trustees of the Research Fund, the publication of the proposal in this and two subsequent issues of the JOURNAL will permit final action to be taken at the 1947 meeting.]

Amend Article XII of the Administrative By-Laws by adding the following:

12. RESEARCH COUNCIL

"a) *Personnel*.—The Research Council shall consist of fifteen members representing the following fields: anatomy and histology; bacteriology (immunology and biologic therapy); biochemistry and animal nutrition; large animal medicine; large animal surgery; parasitology; pathology; physiology and pharmacology; poultry pathology; small animal medi-

cine; small animal surgery; veterinary hygiene; virus diseases; x-ray; and a member-at-large. The members shall be appointed for three-year terms and the appointments so made that the terms of five members shall expire each year.

"b) *Method of Appointment*.—Appointments to the council shall be made by the Board of Governors and the executive secretary, subject to the approval of the Executive Board and confirmation by the House of Representatives.

"c) *Duties*.—The council shall develop plans and projects, based on the establishment of fellowships with any funds that may be provided, for the purpose of encouraging post-graduate study by veterinary graduates and developing more and better qualified veterinary investigators and faculty material. The council shall also serve as a board of review to pass upon all manuscripts submitted for publication in the American Journal of Veterinary Research.

"The Research Council shall select its own officers and formulate its own rules of procedure; it shall also adopt such regulations regarding fellowships and fellowship stipends as may be necessary and appropriate, subject to approval of these regulations by the Executive Board. It shall render a full report annually to the Executive Board and House of Representatives."

13. BOARD OF TRUSTEES—RESEARCH FUND

"a) *Personnel*.—The Board of Trustees of the Research Fund shall consist of the following officers of the Association: president, president-elect, chairman of the Executive Board; treasurer; and executive secretary. These trustees shall be named by their offices and be succeeded from time to time as their successors are elected.

"b) *Duties*.—The Board of Trustees shall establish and organize a trust fund for the purpose of encouraging graduate study by veterinary students; developing more well-qualified research workers and teachers in the field of veterinary science; stimulating interest in, and adequate financial support of, veterinary research problems; offering the services of the Research Council in the correlation of veterinary research; and for the benefit of the public generally in furthering science and research in science, and aiding and informing the public in the care and health of domestic animals and pet animals, including their relationship to human health.

"The Board shall administer all monies collected for the American Veterinary Medical Association Research Fund and perform all necessary duties in connection therewith. It shall render a full report annually to the Executive Board and House of Representatives."

PROPOSAL No. 5

Submitted by the Special Committee on Parasitology for the purpose of establishing a standing committee on parasitology.

12. COMMITTEE ON PARASITOLOGY

"a) *Personnel*.—This committee shall con-

sist of five members, one of these to be appointed for a term of five years. The first members shall be appointed for terms of one, two, three, four, and five years, respectively. The members of this committee shall be veterinarians and they shall represent, so far as possible and practicable, the various phases of the subject of veterinary parasitology, namely, research, teaching, field work, etc. So far as possible, the membership shall also represent the various geographical areas of the United States and Canada.

b) Duties.—It shall be the duty of this committee to report annually on the prevalence and importance of the parasites and parasitic diseases affecting animals and on the available means of combating these parasites and parasitic diseases."

(Continued from page 73)

National Dog Week, Sept. 21-27, 1947. Complete data and a picture, if possible, must accompany nominations before September 10. The only basis of judging will be the number and variety of services the dog performs; age, size, breed, or color will not be considered.

Submit nominations to Harry Miller, director, Gaines Dog Research Center, 250 Park Ave., New York 17, N. Y.

Antivivisectionist Propaganda

Recent state legislation against dog stealing, passed in Massachusetts and New York and pending in California, Maryland, Wisconsin, Pennsylvania, and Michigan, has been labeled a propaganda trick of the antivivisection cult by Dr. Anton J. Carlson, president of the National Society for Medical Research.

Dr. Carlson said, "It seems impossible that any one could believe that universities, state and city health departments, and great hospitals would sponsor thievery. . . . The only reason for the introduction of these bills has been to provide a springboard for fanatic charges by the antivivisectionists against medical and veterinary institutions."

Chemists Back Animal Experiments

The American Institute of Chemists has given the National Society for Medical Research assurance of its full cooperation in perpetuating animal experimentation as a means of biological research. A statement from the Council of the Institute reads:

"The Council of the American Institute of Chemists believes that a fully informed public would not support such (antivivisection) legislation and desires to give its support to all groups seeking to present the true facts to the public. The Council urges the individual members of the Institute to take an active part in seeing that a clear picture is presented, through the press and other organs of public enlightenment, of what animal research truly involves, and what it means both to man and to animals themselves."

APPLICATIONS

The listing of applicants conforms to the requirements of the administrative by-laws—Article X, Section 2.

First Listing

- BERNARD, PAUL**
Sabina, Ohio.
D.V.M., Ohio State University, 1929.
Vouchers: B. W. Bernard and J. L. Jones.
- BROCK, MARY E.**
222 Mt. Sterling Ave., Flemingsburg, Ky.
D.V.M., Michigan State College, 1944.
Vouchers: E. E. Coshow and A. S. Barnes.
- EASON, GEORGE E.**
2342 Johnson City Highway, Kingsport, Tenn.
D.V.M., Alabama Polytechnic Institute, 1942.
Vouchers: D. Coughlin and J. F. Kagey.
- GOBLER, ROBERT P.**
P. P. Box 37, Sonoma, Calif.
D.V.M., Washington State College, 1935.
Vouchers: E. H. Harrison and E. R. Holland.
- HUGHES, DONALD V.**
Middletown, N. Y.
D.V.M., Cornell University, 1937.
Vouchers: H. J. Milks and M. G. Fincher.
- MCDANIEL, GEORGE T. JR.**
Eastman, Ga.
D.V.M., Alabama Polytechnic Institute, 1941.
Vouchers: W. V. Petty and G. W. Moorman.
- ROSENBUSCH, CARLOS T.**
San Jose 1481, Buenos Aires, Argentine Rep.
D.V.M., Iowa State College, 1935.
Vouchers: I. A. Merchant and F. Rosenbusch.
- ROSHON, ELMER L.**
Sabina, Ohio.
D.V.M., Ohio State University, 1919.
Vouchers: A. R. Theobald and R. C. Smith.
- SOLT, JOHN J.**
Arlington, Ohio.
D.V.M., Ohio State University, 1936.
Vouchers: C. A. Pleuger and R. B. Rice.
- WESTON, BRAXTON M.**
Asheboro, N. Car.
D.V.M., United States College of Veterinary Surgeons, 1916.
Vouchers: W. Moore and L. J. Faulhaber.
- WRIGHT, HERSCHEL J.**
656 N. Main Street, Dayton, Ohio.
D.V.M., Ohio State University, 1923.
Vouchers: A. R. Theobald and M. E. Howell.
- YOUNG, SHOU-SHEN**
c/o Yungtai & Co., 40 E. 34th St., New York, New York.
D.V.M., Army Veterinary College, Pekin, 1921.
Vouchers: L. T. Giltner and C. D. Stein.

Second Listing

- Binns, Wayne**, Veterinary Science Dept., Utah State Agricultural College, Logan, Utah.
- Bishop, George C.**, Provincial Agricultural Laboratory, Charlottetown, P.E.I., Can.
- Bonnell, Augustus O.**, 626 Broadway, Room 626, Cincinnati 2, Ohio.
- Fleener, Truman B.**, 5915 E. 11th St., Tulsa, Okla.

Garlie, Adolph O., 812 College Ave., Northfield, Minn.
 Griffin, Charles J., 500 E. High St., Springfield, Ohio.
 Hornaday, Wayne A., Jr., Box 402, Greensboro, N. Car.
 McLean, John E., 30 Argyle St., Halifax, N. S., Can.
 McCullough, J. Walter, 425 McCosh St., Hanover, Pa.
 Marriott, William H., 2 Hartington Pl., Ottawa, Ont., Can.
 O'Donnell, Michael J., 2110 Alum Rock Ave., San Jose, Calif.
 Russell, Heber C., 2948 Magnolia Ave., Berkeley 5, Calif.
 Smith, Harry S., 8 Chenango St., Montrose, Pa.
 Sparks, Quinton W., Box 86, Sully, Iowa.
 Taylor, Gilbert L., 2114 Ave A, Kearney, Neb.
 Versluis, Hendrik, U.S.A.C., Branch Veterinary Laboratory, Box 592, Provo, Utah.
 Wilton, Graham S., Alberta Dept. of Agriculture, Terrace Bldg., Edmonton, Alberta, Can.
 Wiseman, Orville G., 15717 Brewster Rd., East Cleveland, Ohio.

1947 Graduate Applicants First Listing

The following are graduates who have recently received veterinary degrees and who have applied for AVMA membership under the provision granted in the Administrative By-Laws to members in good standing of junior chapters. Applications from this year's senior classes not received in time for listing this month will appear in later issues. An asterisk (*) after the name of a school indicates that all of this year's graduates have made application for membership.

Alabama Polytechnic Institute

THOMPSON, TINY S., D.V.M.,
 608-24th St., S. W., Birmingham, Ala.
 Vouchers: R. S. Sugg and I. S. McAdory.
 THORP, WILTON S., D.V.M.
 615 W. Main St., Nashville, Ill.
 Vouchers: R. S. Sugg and I. S. McAdory.

Cornell University*

BAILEY, JACK W., D.V.M.
 1051 Spaight St., Madison, Wis.
 Vouchers: R. C. Klussendorf and D. W. Baker.
 BONELLI, BENJAMIN P., D.V.M.
 Bonelli Ranch, Saugus, Calif.
 Vouchers: C. P. Zepp, Jr. and H. C. Stephenson.
 CAMPBELL, DONN B., D.V.M.
 King Street, Chappaqua, N. Y.
 Vouchers: H. J. Milks and R. G. Schirmer.
 CARSLLEY, MALCOLM B., D.V.M.
 52 Marian Ave., Pittsfield, Mass.
 Vouchers: H. J. Milks and R. G. Schirmer.
 COOPER, CECIL D. JR., D.V.M.
 Box 53, Avenal, Calif.
 Vouchers: C. P. Zepp, Jr. and C. G. Rickard.
 DRAZEK, FRANCIS J., D.V.M.
 Star Route, Hagaman, N. Y.
 Vouchers: W. J. Gibbons and J. N. Frost.

FELDMAN, GILBERT J., D.V.M.
 1535 Ocean Ave., Brooklyn 30, N. Y.
 Vouchers: J. N. Frost and H. J. Milks.
 FISH, RICHARD A., D.V.M.
 Salt Point, N. Y.
 Vouchers: J. N. Frost and M. G. Fincher.
 FLOYD, J. MITCHELL, D.V.M.
 321 Dryden Rd., Ithaca, N. Y.
 Vouchers: C. M. Jenkins and R. G. Schirmer.
 GRAVES, JOHN H., D.V.M.
 York Road, Hartsville, Pa.
 Vouchers: J. R. Steele and R. G. Schirmer.
 HALLENBECK, MARY C., D.V.M.
 Hoffmans, N. Y.
 Vouchers: J. Sams and H. C. Stephenson.
 HECHT, ESTELLE, D.V.M.
 123 Highland Pl., Ithaca, N. Y.
 Vouchers: P. Olafson and D. W. Baker.
 JONES, RUTH E., D.V.M.
 15 Homestead Ave., Staten Island 2, N. Y.
 Vouchers: R. G. Schirmer and J. N. Frost.
 KEMEN, MATHIAS J., JR., D.V.M.
 Franklin, N. Y.
 Vouchers: D. W. Baker and J. N. Frost.
 KENDRICK, JOHN W., D.V.M.
 New York State Vet. College, Ithaca, N. Y.
 Vouchers: J. N. Frost and H. C. Stephenson.
 LEAHY, JOHN R., D.V.M.
 315 College Ave., Ithaca, N. Y.
 Vouchers: H. C. Stephenson and M. E. Miller.
 MACKEY, EDWIN D., D.V.M.
 R.D. 1, Locke, N. Y.
 Vouchers: R. A. Batchelder and R. G. Schirmer.
 NESERKE, EDWARD I., D.V.M.
 5506 Magnolia Ave., Baltimore 15, Md.
 Vouchers: A. K. Heagerty and R. P. Wagers.
 NEWMAN, RAY C. JR., D.V.M.
 405 College Ave., Ithaca, N. Y.
 Vouchers: H. J. Milks and R. G. Schirmer.
 ORMSBEE, ROBERT W., D.V.M.
 Stockton, Calif.
 Vouchers: W. S. Monlux and C. G. Rickard.
 PHELPS, JOHN L., D.V.M.
 138 Linden Ave., Ithaca, N. Y.
 Vouchers: P. Olafson and J. N. Frost.
 REIGHLEY, JOHN H. JR., D.V.M.
 42 Dartmouth St., Valley Stream, L. I., N. Y.
 Vouchers: M. G. Fincher and J. N. Frost.
 RHODE, EDWARD A. JR., D.V.M.
 R.D. 2, Amsterdam, N. Y.
 Vouchers: J. N. Frost and H. J. Milks.
 ROBINSON, ELMER L., D.V.M.
 Ballston Spa, N. Y.
 Vouchers: J. W. McCann and R. G. Schirmer.
 ROPER, CALVIN B., D.V.M.
 42-12 201 St., Bayside, L. I., N. Y.
 Vouchers: H. J. Milks and R. G. Schirmer.
 ROST, ROBERT C., D.V.M.
 561 Hillside Ave., Westfield, N. J.
 Vouchers: H. J. Milks and R. G. Schirmer.
 RUBIN, HARRY, D.V.M.
 301 Dryden Road, Ithaca, N. Y.
 Vouchers: H. C. Stephenson and M. G. Fincher.
 SAFANIE, ALVIN H., D.V.M.
 Ancram, N. Y.
 Vouchers: P. Olafson and J. N. Frost.
 SAUTER, ROBERT A.
 11 Colonial Road, Bronxville, N. Y.

Vouchers: H. C. Stephenson and R. G. Schirmer.
 SCHAEER, WILLIAM G. JR., D.V.M.
 200 Willard Way, Ithaca, N. Y.
 Vouchers: R. A. Field and R. G. Schirmer.
 SCHIMOLER, LOUIS C., D.V.M.
 80 Calla Ave., Floral Park, L. I., N. Y.
 Vouchers: H. J. Milks and R. G. Schirmer.
 SCHOLTZ, EUGENE R., D.V.M.
 New York State Vet. College, Ithaca, N. Y.
 Vouchers: M. G. Fincher and R. G. Schirmer.
 STEVENS, ALAN D., D.V.M.
 37 Bowers St., Nashua, N. H.
 Vouchers: H. J. Milks and R. G. Schirmer.
 TAYLOR, CLARK A., D.V.M.
 Forest Home Drive, Ithaca, N. Y.
 Vouchers: E. Sunderville and H. C. Stephenson.
 WHALLON, JANE E., D.V.M.
 65 Irving Terrace, Kenmore 17, N. Y.
 Vouchers: W. A. Hagan and H. J. Milks.

Iowa State College

HOWARD, RICHARD T., D.V.M.
 Ankeny, Iowa.
 Vouchers: H. D. Bergman and D. A. Smith.
 SANDER, ROBERT O., D.V.M.
 Waukon, Iowa.
 Vouchers: H. D. Bergman and D. A. Smith.

Texas A & M College

BUCKY, CHARLES B., D.V.M.
 Box 154, Raymondsville, Texas.
 Vouchers: P. W. Burns and W. W. Armistead.
 DODD, DOYLE W., D.V.M.
 W. Tex. Animal Disease Research Lab.,
 Marfa, Texas.
 Vouchers: R. D. Turk and J. H. Milliff.
 FLESHER, RALPH H., D.V.M.
 General Delivery, Vernon, Texas.
 Vouchers: W. W. Armistead and H. T. Barron.
 HENDERSON, JAMES B., D.V.M.
 Burkett Route, Coleman, Texas.
 Vouchers: F. P. Jaggi, Jr. and H. T. Barron.
 HOLBROOK, ALLIE A., D.V.M.
 488 College Street, Morehead, Ky.
 Vouchers: H. T. Barron and F. P. Jaggi, Jr.
 JONES, ALFRED R. JR., D.V.M.
 5200 Orange Road, Port Arthur, Texas.
 Vouchers: W. W. Armistead and R. C. Dunn.
 SCHIEFELBEIN, WILLIAM W., D.V.M.
 Rt. 9, Box 362, San Antonio, Texas
 Vouchers: A. A. Lenert and R. P. Marsteller.
 SOUSARES, JIMMY F. JR., D.V.M.
 337 Foster Ave., Box 1233, College Station,
 Texas.
 Vouchers: R. P. Marsteller and A. A. Lenert.
 SPREIGEL, JOHN M. JR., D.V.M.
 Box 147, Aransas Pass, Texas.
 Vouchers: G. R. Burch and A. A. Lenert.
 STONE, JAMES L., D.V.M.
 2517 Shelby St., Dallas 4, Texas.
 Vouchers: W. W. Armistead and A. A. Lenert.
 STURKIE, HOWARD N., D.V.M.
 Gustine, Texas.
 Vouchers: W. W. Armistead and R. B. England.
 WALKER, HERBERT H., D.V.M.
 Mexia, Texas.

Vouchers: W. W. Armistead and G. R. Burch.
 WARDLAW, LAWRENCE B. JR., D.V.M.
 P. O. Box 331, Del Rio, Texas.
 Vouchers: W. W. Armistead and H. T. Burns.
 YTURRIA, FRANK D., D.V.M.
 2012 Palm Blvd., Brownsville, Texas.
 Vouchers: W. W. Armistead and R. P. Marsteller.

Second Listing

Ohio State University

Cragg, Clinton M., D.V.M., Stevens Point, Wis.

University of Pennsylvania

Silver, Jules, V.M.D., North Franklin, Conn.

U. S. GOVERNMENT

Veterinary Personnel Changes.—The following changes in the force of veterinarians in the U. S. BAI is reported as of May 9, 1947, by Chief B. T. Simms.

TRANSFERS

James W. Annand, from Sioux City, Iowa, to San Francisco, Calif.
 Gordon W. Blake, from Helena, Mont., to Portland, Ore.
 Chester P. Branigan, from Nashville, Tenn., to Memphis, Tenn.
 James H. Cooper, from Fort Worth, Texas, to San Antonio, Texas.
 Louis C. Crow, from Oklahoma City, Okla., to Helena, Mont.
 Harry Klauber from St. Louis, Mo., to Boston, Mass.
 James D. Lyddy, from Boston, Mass., to Butte, Mont.
 Harry McCauley, Jr., from Sioux Falls, S. Dak., to Watertown, S. Dak.
 William A. McDonald, from Jefferson City, Mo., to El Paso, Texas.
 George M. McGee, from Oklahoma City, Okla., to Raleigh, N. Car.
 Irvine Lewis Nebeker, from Caldwell, Idaho, to Salt Lake City, Utah.
 John C. Pace, from Calexico, Calif., to El Centro, Calif.
 Ralph A. Parsons, from Salt Lake City, Utah, to Caldwell, Idaho.
 Maurice S. Shahan, from Washington, D. C., to Mexico City, Mexico.
 Soren C. Sorenson, from Los Angeles, Calif., to San Diego, Calif.
 Robert J. Spain, from Nashville, Tenn., to Memphis, Tenn.

RESIGNED

Carroll F. Alexander, St. Paul, Minn.
 Wallace J. Butson, St. Paul, Minn.
 Terrance A. Dorsey, Des Moines, Iowa.
 Simon J. Goodman, Chicago, Ill.
 William B. Guldenschuh, Chicago, Ill.
 Cyril L. Heinrich, Columbus, Ohio.
 Conley G. Isenberg, Oklahoma City, Okla.

Roy W. McFarland, Los Angeles, Calif.
John E. Quinlan, Chicago, Ill.

RETIRED

John P. O'Connor, Nashville, Tenn.
David F. Stouffer, Omaha, Neb.

Radical Change in Meat Inspection Service Proposed.—As part of its economy program, the House of Representatives passed, on May 20, 1947, an agricultural appropriation bill which, if approved by the Senate, would reduce by more than \$300 million the operating funds of the Department of Agriculture for the next fiscal year. Over \$6 million was taken from the budget for the Bureau of Animal Industry's meat inspection service, with the provision that the costs of this mandatory inspection of meat moving in interstate commerce be transferred to the meat packers operating under federal supervision. The House bill provided a "working capital fund" of \$5 million, without fiscal year limitations, to "furnish an adequate and efficient inspection service" but said that henceforth all packers of meat and meat products, including horse meat, who are under federal inspection, should be assessed for the costs thereof and pay the United States in accordance with regulations to be prescribed by the Secretary of Agriculture.

A last-minute effort was made in the House to restore the meat inspection fund to the budget, but the amendment was defeated by a teller vote of 124 to 114. If the agricultural appropriation bill is finally approved in its present form, it means that, in the future, the meat inspection appropriation will disappear from the annual budget of the department.

Newcastle Disease Increases.—The fight against Newcastle disease is being waged in the District of Columbia, where 100,000 chickens on one farm were vaccinated recently by the U. S. Bureau of Animal Industry. A meeting of research pathologists was called by Chief B. T. Simms in Washington the latter part of May to report on the research work being conducted on this disease, which has been found in 39 states.

Subsequent to the conference of poultry pathologists and poultrymen last November in Baltimore, a control program was set up in the Del-Mar-Va peninsula, where the disease is widespread, but the results of large-scale vaccination trials in progress there will not be determined for some time. Research is underway at many of the state agricultural experiment stations and in the laboratories of the U. S. BAI in Washington and Beltsville, Md.

Losses of 15 to 20 per cent of young birds were reported from infected flocks in many states, as well as a marked decrease in egg production two to eight weeks after infection. The Bureau's list of 68 sanitary measures to combat the disease will be sent on request.

Propyl Gallate as a Preservative.—In a memorandum (No. 104) from the Meat Inspection Division, U. S. BAI, approval is given for the use of propyl gallate (in a quantity not ex-

ceeding 1/100 of 1 per cent) as a preservative to animal fats and shortenings containing animal fats. When this preservative is used with, for example, corn oil and lecithin, the statement "With not more than 1/100 of 1 per cent of propyl gallate in corn oil and lecithin added as a preservative" shall appear on the label in direct connection with the name of the product.

S/C. H. PALS.

Firms Enjoined in Hog-Cholera Antiserum Sales.—A permanent injunction was issued against Luther B. Brawner (in business as the Brawner Serum Co.), Lathrop, Mo., and Vernon T. Wigglesworth (in business as the Naylor Serum Co.), Kansas City, Mo., for violations of the Marketing Agreement for handlers of hog-cholera virus and antiserum. Judge Collet of the U. S. District Court for the Western District of Missouri issued the injunction.

USDA Yearbook.—The new yearbook of agriculture, *Science in Farming*, for 1943-1947 has been issued by the USDA. It includes, in its 1,094 pages, 135 reports and 136 pages of pictures on research of the past few years in all phases of farming, gardening, and homemaking. The 158 contributors are government and laboratory technicians, and they write of discoveries in almost every state of the Union and several foreign countries.

For example, Dr. Benjamin Schwartz of the U. S. BAI, tells how to use rotenone, phenothiazine, sulfa drugs, skimmilk, and other preparations to control the 100,000 kinds of parasites which damage our meat and leather supplies. Another representative of the Bureau, Dr. L. T. Giltner, describes methods of combating animal disease.

COMMENCEMENTS

Cornell University

At the commencement exercises of the New York State Veterinary College, Cornell University, on June 16, 1947, Dean W. A. Hagan presented thirty-four candidates for the D.V.M. degree. The names of the graduating students appear with the accompanying class picture.

The following awards were presented to graduating honor students at the annual honor day exercises in Willard Straight Hall on May 14: the Borden Veterinary Scholarship Award (\$300) for the highest scholastic record in all veterinary studies for the first three years, Mary Catherine Hallenbeck; the Charles Gross Bondy Prize for the best work in practical medicine and surgery of the small animal, Clark A. Taylor, first prize (\$25), John L. Phelps, second prize (\$15), and Malcolm Carley, honorable mention; the Anne Besse Prize for the best work in medicine and clinical diagnosis, Elmer L. Robinson, first prize (\$25), Benjamin P. Bonelli, second prize (\$15), and Cecil D. Cooper, Jr., honorable mention; the James Gordon Bennett Prize for students who show the greatest humaneness in han-

dling animals, with special reference to anesthesia, Cecil D. Cooper, Jr., first prize (\$25), John Henry Reighley, Jr., second prize (\$15), and Louis C. Schimoler, honorable mention; the Mary Louise Moore Prize (\$40) for the best work in bacteriology, Mary Catherine Hallenbeck; the Poultry Disease Prize (\$50) for an essay entitled "Blackhead in Turkeys," by Malcolm B. Carsley; the Alpha Psi Prize (\$25 bond) for student best equipped to advance the standards of veterinary science, Robert

W. Ormsbee; the New York State Veterinary Medical Society prize for the best case reports in *Veterinary News*, William G. Schaefer, Jr., first prize (\$25), Jack W. Bailey, second prize (\$15), and Benjamin P. Bonelli, third prize (\$10); the Horace K. White Prize for the highest academic records for the entire veterinary course, Mary Catherine Hallenbeck, first prize (\$75), John H. Graves, second prize (\$25), and Cecil D. Cooper, Jr., honorable mention.

Class of June, 1947

New York State Veterinary College

CORNELL UNIVERSITY

Ithaca, N. Y.



Top row (left to right)—E. L. Robinson, Malcolm Carsley, George Willis, Calvin Roper, William G. Schaefer, Gilbert Feldman, Robert Sauter, Clark Taylor, Calvin Newman, Edward Rhode, John Reighley, Edward D. Mackey.

Middle row (left to right)—Richard Fish, Eugene Scholtz, John Leahy, Louis Schimoler, Mathias J. Kemen, John Phelps, John W. Kendrick, John Graves, Harry Rubin, J. Mitchell Floyd, Cecil Cooper, Ben P. Bonelli, Donn Campbell, Edward Nesperke, Alvin Safanie, Francis Drazek, Alan D. Stevens.

Bottom row (left to right)—Ruth Jones, Jane Whallon, Dr. M. G. Fincher, Dr. J. N. Frost, Dr. H. J. Milks, Dean W. A. Hagan, Dr. Peter Olafson, Estelle Hecht, Mary Hallenbeck, Kenneth Benson.

Missing at time of picture—Jack Bailey, Robert Ormsbee.

A. & M. College of Texas

At the commencement exercises of the Agricultural and Mechanical College of Texas on May 30, 1947, Dean Emeritus R. P. Marsteller presented the following candidates for the D.V.M. degree.

Joseph Beninson
John Melvin Bryan
Charlie B. Bucy
Ben Wilson Clyatt
Doyle Wilson Dodd
Ralph Hines Flesher
Harvey C. Gissell

Walter Heinen
James B. Henderson
Allie A. Holbrook
John Norton Hunt
Alfred R. Jones, Jr.
James Francis Kelty
John Francis Moore

Thomas G. Murnane
Carol M. Patterson
Chester J. Reed, Jr.
Melvin Earl Rentler
Wm. H. Schiefelbein
J. F. Sousares, Jr.

Frank D. Yturria

J. M. Spriegel, Jr.
H. L. Stoddard, Jr.
James L. Stone
Howard N. Sturkie
Herbert H. Walker
L. B. Wardlaw, Jr.

The following candidates received the D.V.M. degree in January, 1947:

William R. Benson
Robert D. Brown
Scott Haggard
William V. Howells

Paul F. Jungerman
Ben B. McCollum, Jr.
Robert W. Van Nieu
James A. Wright

AMONG THE STATES AND PROVINCES

California

Southern Association.—The Southern California Veterinary Medical Association and Small Animal Association held a dinner meeting on May 21. Moving pictures on "Equine Encephalomyelitis" were followed by a panel discussion led by Drs. G. N. Miller, C. H. Reid, and Carl E. Wicktor. Mr. Charles Travers, recently appointed fulltime secretary of the California state association, was a guest.

S/A. MACK SCOTT, *Secretary.*

Seventeen Milk Tests Recommended.—San Francisco's department of public health has recommended a series of 17 tests to insure a safe and sanitary milk supply, according to *Milk Dealer*. Included are total bacteria count, coliform count, phosphatase test, tests for specific organisms, chemical tests, routine organoleptic examination, and examination of personnel and animals for infectious diseases.

Illinois

Eastern Association.—On May 26, the Eastern Illinois Veterinary Medical Association held a dinner meeting at the Hotel Tilden Hall in Champaign. A colored motion picture, "Surgery of the Bovine Eye," was followed by a panel discussion.

S/GEORGE E. HUNT.

Indiana

Gary's K-9 Bobby.—At the southern tip of Lake Michigan where Indiana lopped off a sizable segment of Chicago's steel industry, there lives a celebrated dog that made coast-to-coast headlines in March. His name is Duke,



—From the Chicago Sun

Gary's famous "K-9," Duke, officer 243.

a Dalmatian, an honorary member of the Gary police force—badge No. 243. When a burglar smashed the front window of a Gary store and made off with two radios, Duke chased him down the street and captured him red handed. He also does his master's banking. Result: newspaper notoriety, hundreds of letters from the fancy, and an offer from the movies.

• • •

Pitman-Moore Addition Underway.—On May 9, 1947, Mr. C. N. Angst, president of the Pitman-Moore Company division of Allied Laboratories, Inc., threw the first shovelful of earth in the ground-breaking for the erection of a new six-story building at Madison Ave. and Morris St., Indianapolis.

Iowa

State Association Field Day.—The Iowa Veterinary Medical Association is completing plans for a field day to be held at the Sunnyside Country Club in Waterloo on August 1. The activities will start at 10 a.m., and all final scores will be posted by 6 p.m.; noon luncheon and an evening banquet will be served. Committees have been appointed for the following events: championship and blind bogey, cribbage, horse shoe pitching, trap shooting, ball casting, driving contest, approaching contest, and putting contest.

S/KARL W. SCHALK, *Chairman.*

• • •

Waterloo Clinic.—Three hundred veterinarians registering from Iowa, Missouri, Nebraska, Minnesota, Wisconsin, Illinois, and Mississippi attended the practitioners' clinics in Waterloo sponsored by the Cedar Valley Veterinary Association on May 27. Dr. Harold D. Osborne of Gladbrook was general chairman, and Dr. C. B. Strain of Dunkerton headed the committee on arrangements. Outstanding authorities on diagnosis and surgical procedures were featured, and new methods and equipment were demonstrated.

To a reporter on the *Cedar Rapids Gazette*, the clinic showed two things: only light breeds of horses were seen, and the spaying of heifers is coming back. Dr. W. L. Stroup was there again to show 'em how to take the feet out from under a critter "just like that," and Dr. M. A. Emmerson of the Iowa State College, who has a knack of keeping a jump or two ahead of the crowd, was there to prove that an x-ray machine in every kit is the right way to practise veterinary medicine.

S/KARL W. SCHALK.

Michigan

Western Association.—Dr. and Mrs. J. E. Cook were host and hostess to the Western Michigan Veterinary Medical Association at the May 22 meeting held in the Warm Friend Tavern, Holland. Thirty-five veterinarians and their families attended. Dr. Lucas, head of the history department of the University of Washington, Seattle, Wash., spoke on the history of the Dutch settler in this country, with emphasis on the Michigan settlement. The theme was prompted by the Holland centennial celebration this year. Following the guest

speaker, current veterinary practice problems were discussed.

s/FRANK THORP, JR.

Michiana Meetings.—The Michiana Veterinary Medical Association held a dinner meeting on May 15 at "The Oakes" in South Bend, Ind. Doctors Smith and Fraser comprised the program.

The Association met for a dinner session at the Arlington Hotel, Coldwater, Mich., on June 12.

s/W. G. MAGRANE.

Michigan-Ohio Association.—The annual meeting of the Michigan-Ohio Veterinary Medical Association was held at the Shores farm, one mile west of Manchester, on May 22. Following a luncheon served by Mr. Shores, two papers were presented.

Dr. Costas S. Alvanos, Toledo, Ohio: "Some Causes of Convulsions and Fits in Dogs."

Dr. Glen W. Reed, East Lansing: "Cattle Practices."

After the meeting, the group was invited to inspect the poultry establishment on the farm, where ducks, chickens, and turkeys are raised under ideal conditions.

Missouri

St. Louis Association Officers.—The new officers of the Greater St. Louis Veterinary Medical Association, elected April 4 at the meeting in the Roosevelt Hotel, are as follows: Dr. C. W. Darby, *president*; Dr. G. R. Killian, *vice-president*; Dr. H. S. Richards, *treasurer*; and Dr. W. C. Schofield, *secretary*.

The newly adopted constitution and by-laws of the Association provide for four stated meetings on the first Friday of February, April, June, and November, with special meetings to be called at the discretion of the governing board.

s/W. C. SCHOFIELD, *Secretary*.

Kansas City Association.—Dr. H. E. Pinkerton, Fort Dodge Laboratories, Inc., spoke on "Swine Disease Problems and Solutions" at the May 20 meeting of the Kansas City Veterinary Medical Association. Problems of swine practice were discussed following his presentation. Drs. R. L. Messer and R. L. Anderes told of the American Animal Hospital Association meeting held in Tulsa in April.

s/GAIL B. SMITH, *Secretary*.

St. Louis Association.—The June 6 meeting of the Greater St. Louis Veterinary Medical Association was held at the Ralston Purina Research Building in St. Louis. Dr. L. M. Hutchings, research associate in the Department of Veterinary Science, Purdue University, Lafayette, Ind., spoke on "Recent Developments and Studies in Swine Brucellosis," with special emphasis on baby pig enteritis, and illustrated his talk with films on the disease. Dr. Guy Railsback, field veterinarian for Cutter Laboratories, led a discussion on Dr. Hutchings' presentations, followed by Dr. W. B. Holmes' film on "Foot-and-Mouth Disease in Mexico."

s/W. C. SCHOFIELD, *Secretary*.

Nevada

Association Meeting.—The first postwar annual meeting of the Nevada State Veterinary Association was held at the University of Nevada in Reno, May 1-2, 1947. Following the business meeting, the guest speakers were introduced.

Dr. G. T. Woodward, Fallon: "Report on Colorado Short Course."

Dr. Nick Klaich, Fort Collins, Colo.: "Report on Intermountain Veterinary Medical Association Meeting."

Dr. E. E. Maas, San Juan, Puerto Rico: "Veterinary Work in Puerto Rico."

Dr. Harold H. Groth, San Mateo, Calif.: "Small Animal Practice," and "Clinical Demonstrations" held at the Key Veterinary Hospital, Reno.

Dr. Edward Records, University of Nevada, Reno: "Collecting and Shipping Laboratory Specimens."

Dr. L. R. Vawter, University of Nevada, Reno: "Muscular Dystrophy of Lambs and Calves."

The officers for the coming year are as follows: Dr. Edward Records, Reno, *president*; Dr. Chester H. Kennedy, Elko, *vice-president*; and Dr. Warren B. Earl, *secretary*.

s/WARREN B. EARL, *Secretary*.

New Jersey

"Jane Doe Finds Haven."—A story of interest to animal lovers appeared in the *Newark (N.J.) Sunday News*, Jan. 12, 1947. A 160-lb. wounded doe was found by two women who were driving at night on a deserted country road near Califon. The doe was lifted, protesting, into their car and treated by Dr. John D. Case of Clinton. Mrs. Elinor Ruperti, who picked up the deer and bedded it down in an empty section of her turkey barns, was not assessed the usual fine for keeping the animal, because of the humaneness of the act. Dr. Case predicted that the doe would be back in the wilds again within a month from the time its foreleg was set and placed in a cast.

s/J. R. PORTEUS, *Resident Secretary*.

Additional Schering Grants.—The Schering Corporation of Bloomfield and Union, manufacturers of pharmaceutical products, has announced an additional number of grants for endocrine and pharmacologic research studies to research foundations, medical, and pharmacy colleges. In March, fellowships were established or extended at eight institutions for special experimental studies.

New Mexico

Mexican Government Commended.—Cattle and sheep producers from the border states of Arizona, California, New Mexico, and Texas—represented by the newly formed Border States Foot-and-Mouth Disease Control Board—apparently are well satisfied with the moves Mexico has been making to control foot-and-mouth disease. At a meeting in Albuquerque, April 22, called by Governor Warren of California, the Board passed a resolution commending Mexico's efforts to handle the disease. Dr. C. U. Duck

worth of the California state department of agriculture is a member of the Board.

The general feeling at the meeting, says *The California Wool Grower* (Apr. 29), was that United States livestock producers have "no reason to become over-excited about the present situation."

New York

Farewell to Col. B. A. Seeley.—Veterinary officers in the Greater New York area attended a farewell dinner for Col. B. A. Seeley, who is leaving the area as First Army Veterinarian, in the Officers Club at Fort Jay on May 14. Those attending the dinner were: Colonels B. A. Seeley (ISC), H. E. Hess (UP), and J. R. Sperry (OSU); Lt. Col. G. W. Holmberg (OSU); Majors K. H. Willers (COLO), C. B. Johnston (ISC), D. Ehrlich (CORN), H. R. Faust (TEX), and R. D. Chadwick (OSU); Captains C. A. DeValois (ISC), L. W. Thompson (API), A. H. Davis (UP), D. J. Collins (MSC), I. R. Cooper (API), R. E. Dullum (ISC), and O. A. Soave (WASH); First Lieutenants R. C. Jones (UP), Bruce Ott (MSC), J. C. Smith (KSC), and N. A. Cole (API). Ten veterinary colleges were represented.

Personal.—Dr. Jacob Traum (CORN '05), professor of veterinary research at the University of California, visited the Cornell campus in April to address veterinary seniors and



Dr. D. H. Udall (left) and Dr. Jacob Traum on the Cornell campus.

faculty on the differential diagnoses of foot-and-mouth disease, vesicular stomatitis, and vesicular exanthema.

New York City Association.—The June 4 meeting of the Veterinary Medical Association of New York City featured Edward Neuheuser, M. D., roentgenologist, Children's Hospital, Boston, Mass., and associate in radiology, Harvard Medical School, Boston. He spoke on

"Radiological Interpretations — Diseases of Bones" (illustrated). Dr. Fritz Nilsson, assistant professor of veterinary surgery, Royal Veterinary College, Stockholm, Sweden, who is at present traveling in this country, was a guest of the Association.

s/C. R. SCHROEDER, *Secretary.*

Ohio

Conference for Veterinarians.—The Ohio State University College of Veterinary Medicine held its sixteenth annual conference for veterinarians in Columbus, June 11-13, 1947. The following speakers appeared on the program.

Dr. E. J. Catcott, The Ohio State University: "Fundamental Safeguards and Practice in Radiology."

Dr. Joseph DeVita, New Haven, Conn.: "Clinical Endocrinology."

Dr. W. H. Riser, Evanston, Ill.: "Newer Developments in Surgery and Pathology."

Dr. C. F. Schlotthauer, Mayo Foundation, Rochester, Minn.: "Nervous Disorders."

Dr. H. W. Schoening, U. S. BAI, Washington, D. C.: "The Present Status of Rabies Vaccine."

Dr. R. L. Rudy, The Ohio State University: "Penicillin Concentration in Blood Plasma."

"The Mastitis Problem" was discussed in its various phases by the following speakers.

Dr. F. D. Fox, The Ohio State University: "Etiology and Clinical Diagnosis."

Dr. W. D. Pounden, Ohio Agricultural Experiment Station, Wooster: "Laboratory Diagnosis and Treatment."

Dr. Fox and Dr. Pounden: Open discussion.

Dr. B. T. Simms, chief, U. S. BAI, and president of the AVMA: "Foot-and-Mouth Disease," and "The Future of Brucellosis Control."

Dr. J. T. Schwab, Oconomowoc, Wis.: "Post-parturient Complications in Dairy Cattle."

Dr. C. R. Cole, The Ohio State University: "Malignant Catarrhal Fever of Cattle."

Dr. A. P. Horlein, Iowa State College, Ames: "The Diagnosis of Animal Dermatophytoses."

Dr. E. R. Frank, Kansas State College, Manhattan: "Surgery of the Horse" (with colored motion film).

Dr. W. G. Venzke, The Ohio State University: "Reproduction Hormones in Farm Animals."

Dr. R. E. Lubbehusen, Ralston Purina Co., St. Louis, Mo.: "Clinical Diagnosis of Some Nutritional Deficiencies."

Dr. L. P. Doyle, Purdue University, Lafayette, Ind.: "Enteritis in Swine" (with motion film).

Dr. B. H. Edgington, The Ohio State University and Agricultural Experiment Station: "Observations on the Use of Hog-Cholera Vaccines."

s/R. E. REBRASSIER, *Chairman.*

Rabies Inoculation Required.—The City Council of Cincinnati has enacted an ordinance requiring owners to have their dogs inoculated against rabies once each year, to become effective Jan. 1, 1947. The cost to owners will be 25 cents for a tag, plus the veterinarian's fee. The fine for failure to comply with the regulation will be \$25 to \$100.

s/CARL PLEUGER.

Dr. Goss Retires.—After twenty-seven years as professor of veterinary pathology in the Col-

lege of Veterinary Medicine of The Ohio State University, Dr. Leonard W. Goss retired at the end of the school year in May, 1947. Receiving his D.V.M. from The Ohio State University in 1905, he studied at Michigan State College in



Dr. L. W. Goss

1906, and at the University of Berlin and the Berlin Veterinary College in 1911-1912. He served fourteen years (1905-1919) in the School of Veterinary Medicine, Kansas State College, previous to his tenure at Ohio State.

Active in AVMA affairs throughout his career, Dr. Goss has missed but three annual meetings in thirty years. He has also taken an active part in the Ohio State Veterinary Medical Association, acting as chairman and member of many committees.

Among the scientific societies of which he is a member are the American Association of Pathologists and Bacteriologists, the International Association of Medical Museums, and the American Association for the Advancement of Science.

Under his advisorship, 32 men have received M.S. degrees and one the Ph.D. degree in pathology as their field of specialization.

Oklahoma

Veterinary Short Course.—The Oklahoma Veterinary Medical Association held its summer meeting and veterinary short course at Oklahoma A. & M. College, Stillwater, June 9-10, 1947. Following the call to order by Dr. C. H. McElroy, acting dean of veterinary medicine, and the address of welcome by President Henry G. Bennett, Oklahoma A. & M. College, the following speakers were featured.

Dr. Donald V. Benson, Research Foundation, Oklahoma A. & M. College: "Diagnosis of Bovine Mastitis and Treatment with Antibiotics."

Dr. Herman Farley, Veterinary Research Institute, Oklahoma A. & M. College: "Anaplasmosis and the Veterinary Research."

Dr. R. C. Dunn, dean, School of Veterinary Medicine, A. & M. College of Texas, College Station: "Rabies, Pseudorabies, and Piroplasmiasis in Dogs" (pictures, comments, questions).

Dr. James Farquharson, Colorado A. & M. College, Fort Collins: "Cesarean Section in the Bovine Animal" (with pictures); "Operation, Enuclation of the Eye of the Bovine Animal with Plastic Repair;" and "Cryptorchid Operation (Horse)."

Dr. D. E. Cooperrider, Veterinary Research Institute, Oklahoma A. & M. College: "Internal Parasites of Cattle" (with specimens).

Dr. W. F. Irwin, Tulsa: "Operation, Recto-Vaginal Surgery in the Canine Animal," and "Chest Surgery in the Dog."

Dr. H. J. Hensley, Oklahoma A. & M. College: "Problems in Artificial Insemination."

s/O. E. ROBINSON, *Resident Secretary.*

Pennsylvania

Keystone Association.—The last meeting of the season for the Keystone Veterinary Medical Association was held May 28, 1947, in the University of Pennsylvania School of Veterinary Medicine. Dr. W. S. Rawlings of Limberick was the guest speaker.

s/RAYMOND C. SNYDER, *Secretary.*

Bucks-Montgomery Association.—Dr. Rosenberger of the Wilmington, Del., Animal Hospital, spoke on "Skin Diseases and Their Treatment" at the June 11 meeting of the Bucks-Montgomery Veterinary Medical Association, held at the Moose Home in Doylestown.

s/J. G. SHUTE, *Secretary.*

Texas

Short Course for Pullorum Testers.—A three-week poultry short course was given at Texas A. & M. College in June. The first two weeks was devoted to chickens and the third week to turkeys. Students attending the full course were given credits qualifying them for official work under the National Poultry Improvement Plan.

Junior Association Officers.—The junior chapter of the AVMA at Texas A. & M. College has elected the following officers for the fall semester (1947-48): Harold L. Hurst, *president*; Albert Roberson, *president-elect*; Robert V. Johnston, *vice-president*; Max W. Lowe, *secretary-treasurer*; William P. Switzer, *reporter*; Robert K. Morris, *sergeant-at-arms*; and Earl E. Roth, *parliamentarian*. Faculty advisors are Drs. Willis W. Armistead, George R. Burch, and R. C. Dunn.

s/R. P. MARSTELLAR, *Dean Emeritus.*

Panhandle Association.—The Panhandle Veterinary Association met in Amarillo on May 14 for a full day's program. The morning session featured a small animal clinic directed by Dr. H. T. Cartrite; Dr. W. F. Irvin of Tulsa also spoke. A large animal clinic directed by Dr. E. F. Lanham featured, Dr. Ab Quin of Kansas City in the afternoon session. At an evening banquet, Dr. H. E. Redmond reported on the progress of the wheat poisoning investigations in Texas.

s/L. M. GRIFFIN.

Bexar County Association.—The March meeting of the Bexar County Veterinary Medical Association featured a round-table question

box discussion led by Drs. W. C. Dye, A. E. Wharton, and Barry Rich.

At the April meeting, the Association viewed films on brucellosis, artificial insemination, and feeding.

s/R. A. CULPEPPER.

Personal.—Dr. Albert C. Nagle (MSC '38) has recently opened a new veterinary clinic for the practice of small animal medicine and surgery at 3501 McCullough, San Antonio.

Wisconsin

State Association.—The Wisconsin Veterinary Medical Association held its semiannual meeting at the Hotel Northern in Chippewa Falls, June 19-20, 1947. Following President C. E. Hammerberg's address and the business meeting, the program featured these speakers:

Dr. W. Wisnicky, Fond du Lac: "Brucellosis Control in the Future." Discussion by Drs. John Pritchard, S. T. Donovan, and S. K. Andreassen.

Dr. W. L. Boyd, University of Minnesota, St. Paul: "Veterinary Medical Education." Discussion by Drs. C. A. Brandly, C. E. Hammerberg, and John Berggren.

Dr. G. R. Spencer, University of Wisconsin, Madison: "Progress Report on Mastitis Research." Discussion by Drs. Bob Curtis, J. L. Kuenster, and W. Wisnicky.

Dr. J. C. Carey, West Liberty, Iowa: "Cattle Diseases." Discussion by Drs. T. H. Ferguson, R. E. Hauke, and J. W. Foley.

Dr. Frank Thorp, Michigan State College, East Lansing: "Sheep Diseases." Discussion by Drs. Quintin Metzlg, S. C. Bernhardt, and Werner Hillstrom.

Dr. R. Fenstermacher, University of Minnesota, St. Paul: "Diagnosis Laboratories." Discussion by Drs. Harvey Hoyt and Z. L. Williams.

Dr. Arlye McDermid, Poynette: "Diseases of Fur Bearing Animals." Discussion by Drs. C. K. Whitehair and W. Wisnicky.

Dr. James Farquharson, Colorado A. & M. College, Fort Collins: "Surgical Procedures Illustrated." Discussion by Drs. Edward Boesewetter, George Gettelman, and Elery Meyer.

Dr. B. S. Pomeroy, University of Minnesota, St. Paul: "Turkey Diseases." Discussion by Drs. C. A. Brandly and W. R. Pritchard.

Dr. S. H. McNutt, University of Wisconsin, Madison: "Swine Diseases." Discussion by Drs. R. B. Hipenbecker, Howard Brooks, and B. L. Lawlor.

Dr. C. E. Hammerberg was toastmaster at the banquet held on June 19. Winnebago Indian Chief Silver Tongue of Wisconsin Dells entertained with vocal selections, and Dr. R. C. Finkle of Seymour presented "Magicology."

s/B. A. BEACH, Secretary.

Southeastern Meetings.—The May 15 meeting of the Southeastern Wisconsin Veterinary Association was held at Ben's Club near Juneau. The topic for discussion was "Nutrition."

The Association met at the Wilson Hotel, Port Washington, on June 5. Dr. W. D. Daugherty spoke on "Endocrine Gland Products. K-Pins and Mastitis."

s/J. O. McCoy, Secretary.

Southwestern Association.—The Southwestern Wisconsin Veterinary Medical Association met at the Hotel Darlington in Darlington on June 12. Dr. J. G. Hardenbergh, AVMA, Chicago, spoke at the afternoon meeting.

Following the banquet, Dr. Walter B. Holmes of Springfield, Ill., showed sound movies on Mexico, with emphasis on foot-and-mouth disease; "Midwinter in Florida;" "Canadian Rockies;" and "Successful Swine Raising." A discussion followed the presentation of the pictures.

University Veterinary News Letter.—*Veterinary Science News* is the name of an 8-page-and-cover mimeograph release from the Veterinary Science Department of the University of Wisconsin to the licensed veterinarians of the state.

Appearing for the first time under date of April 15, 1947, the letter of transmittal from Dr. G. K. Underbjerg (ISC'43), chairman of the editing committee, says, "It is the objective of the *Veterinary Science News* to bring unbiased information to the veterinary profession in Wisconsin. It is hoped that we will be able to keep up-to-date on timely subjects and disseminate information in a manner so that it will be of mutual benefit to everybody concerned in the profession. In doing so, we believe that the veterinarians in the field are better qualified to disseminate information to the farmers on problems of health and disease than most other agencies. We also believe that you are better qualified than the uninitiated to judge matters of controversial nature pertaining to veterinary problems when they present themselves."

Volume 1, No. 1 contains concise summaries by the following authors:

Dr. C. A. Brandly.—The Foot-and-Mouth Disease Situation.

Dr. C. A. Brandly and Prof. J. G. Halpin.—Newcastle Disease [pneumoencephalitis] of Poultry.

Dr. S. H. McNutt.—Melitensis Infection in Swine.

Prof. B. B. Morgan and R. H. Grummer.—The Efficacy of Sodium Fluoride for Light Infections of Swine Ascarids.

Dr. R. G. Spencer.—Bovine Mastitis.

Mr. R. P. Hanson.—Calf Pneumoenteritis.

Dr. D. T. Berman.—Use Care in Vaccinating Calves.

There are two requests for field specimens for research study: Drs. Paulo Dacorso and S. H. McNutt ask for tumors, and Drs. A. F. Weber and G. K. Underbjerg want sections of genitalia and endocrine organs from cattle disposed of because of functional sterility.

FOREIGN

Brazil

Hog Cholera Widespread.—Heavy losses from hog cholera have been reported in the region of Sao Paulo. Spread of the disease is attributed to the feeding of garbage, uncontrolled movement of animals, and infection-carrying vehicles and handlers. The govern-

ment has not assisted in control work, due to lack of facilities, but it has sent producers a circular containing suggestions for dealing with the problem. Vaccination, strict isolation of healthy swine, and serum treatment for valuable animals head the list of recommendations.—*Abstract in Biol. Abstr., Sec. F, Feb., 1947, from Biológico.*

England

Progress in Bovine Mastitis Control.—In a communication to the JOURNAL, T. Dalling, M.R.C.V.S., director of the government veterinary laboratory at Weybridge, points out that British veterinarians are stepping up efforts to control bovine mastitis.

This disease is robbing the United Kingdom of about 40 million gal. of milk each year, Mr. Dalling says, with *Streptococcus agalactiae* being the principal offender. Research is being centered almost entirely on elimination of this organism from infected udders, primarily through the use of sulfanilamide emulsions and penicillin. Dairymen are being urged to sterilize all equipment with steam, including the essential parts of milking machines, and to administer immediate antiseptic treatment for cracks, wounds, and sores on teats and udders. A hypochlorite solution is recommended for washing the udders and teats, as well as the milkers' hands.

Newcastle Disease Epizootic.—Newcastle disease (avian pneumoencephalitis), absent from Britain for thirteen years, is sweeping across England and Wales, according to *The Veterinary Record* (April 26). The initial diagnosis in the present epizootic was made on Feb. 27, 1947; seven weeks afterward, 70 outbreaks were diagnosed. Morbidity is said to be near 100 per cent; mortality is difficult to estimate because most owners have salvaged contact birds by slaughter in the early stages of the disease.

A marked difference between British and American outbreaks is in the age of birds affected. Whereas in the United States young chicks are affected most severely, in the British epizootic, mature fowls are mainly involved, with but few cases reported in growing stock.

The greater number of outbreaks occurred on small, mixed farms or in backyard flocks. Uncooked swill, containing offal from imported poultry, is blamed for some, if not the major part, of the losses. Writers in *The Veterinary Record* state: "The occurrence of a number of widespread outbreaks within the period of seven weeks would suggest the introduction of the disease in one or more infected consignments of dead but undressed table poultry recently imported." The country or countries suspected were not named.

Finland

Parasites of Domestic Animals.—*Cysticercus cellulosae* appears to be decreasing in extent in Finland. No case has been seen since 1940. Echinococcus cysts were found in only 2 cattle, 8 swine, and 1 sheep during 1942, but in 1936 there were 81, 166, and 397 cases reported for these species, respectively. *Cysticercus tenuicollis* is very common.—A. G. Karlson.

Mexico

Drouths.—Add drouth to the troubles of northern Mexico, where stockmen are in an economic crisis said to be precipitated by the United States quarantine against their cattle. A correspondent to the *Western Livestock Journal* says it is "the worst drouth in the memory of the old timers," and many cattle have died.

COMING MEETINGS

Idaho Veterinary Medical Association. Owyhee Hotel, Boise, Idaho, June 30 and July 1, 1947. Arthur P. Schneider, Dept. of Agriculture, Boise, Idaho, secretary.

Pacific Northwest Veterinary Medical Association. Portland, Ore., July 7-9, 1947. Walter W. Weller, P. O. Box 485, Ashland, Ore., secretary.

Montana Veterinary Medical Association. Northern Hotel, Billings, Mont., July 10-11, 1947. E. A. Tunnick, Montana Agricultural Experiment Station, Bozeman, Mont., secretary-treasurer.

Kentucky Veterinary Medical Association. Conference for Veterinarians. Brown Hotel, Louisville, Ky., July 16-17, 1947. C. A. Roll, 827 E. Broadway, Louisville, Ky., secretary-treasurer.

Central Canada Veterinary Association. La Salle Hotel, Kingston, Ont., July 25-26, 1947. H. Konst, Animal Diseases Research Institute, Hull, Quebec, secretary-treasurer.

New York State Veterinary Medical Association. Grand Union Hotel, Saratoga Springs, N. Y., July 25-27, 1947. J. J. Regan, 1231 Gray Ave., Utica, N. Y., secretary.

American Women's Veterinary Medical Association. Netherland Plaza Hotel, Cincinnati, Ohio, Aug. 18, 1947. Lucille S. Dimmerling, 1060 Dresden Ave., East Liverpool, Ohio, acting secretary.

American Veterinary Medical Association. Eighty-fourth Annual Session, Netherland Plaza Hotel, Cincinnati, Ohio, Aug. 18-21, 1947. J. G. Hardenbergh, American Veterinary Medical Association, 600 S. Michigan Ave., Chicago 5, Ill., executive secretary.

Alabama Polytechnic Institute. Annual Conference for Veterinarians. Alabama Polytechnic Institute, Auburn, Sept. 4-6, 1947. R. S. Sugg, College of Veterinary Medicine, Alabama Polytechnic Institute, dean.

Purdue University. Annual Short Course for Veterinarians, Purdue University, Lafayette, Ind., Oct. 1-3, 1947. C. R. Donham, Dept. of Veterinary Science, Purdue University, head. Eastern Iowa Veterinary Association, Inc. Hotel Montrose, Cedar Rapids, Iowa, Oct. 14-15, 1947. Laurence P. Scott, P. O. Box 325, Waterloo, Iowa, secretary.

Pennsylvania State Veterinary Medical Association, Penn Harris, Harrisburg, Pa., Oct. 15-17, 1947. Raymond C. Snyder, N. W. Cor. Walnut St. and Copley Rd., Upper Darby, Pa., secretary.

Florida State Veterinary Medical Association. Bennett Hotel, St. Augustine, Fla., Oct. 27-28, 1947. V. L. Bruns, Box 623, Williston, Fla., secretary-treasurer.

Southern Veterinary Medical Association. Roosevelt Hotel, New Orleans, La., Nov. 17-19, 1947. A. A. Husman, 320 Agricultural Bldg., Raleigh, N. Car., secretary.

Chicago Veterinary Medical Association. Palmer House, Chicago, Ill., the second Tuesday of each month. Robert C. Glover, 1021 Davis St., Evanston, Ill., secretary.

Keystone Veterinary Medical Association. School of Veterinary Medicine, University of Pennsylvania, Philadelphia, Pa., the fourth Wednesday of each month. Raymond C. Snyder, N. W. Cor. Walnut St. and Copley Rd., Upper Darby, Pa., secretary.

Massachusetts Veterinary Association. Hotel Statler, Boston, Mass., the fourth Wednesday of each month. E. A. Woelffer, c/o H. P. Hood & Sons, Boston, Mass., secretary-treasurer.

New York City Veterinary Medical Association. Hotel Pennsylvania, New York, N. Y., the first Wednesday of each month. C. R. Schroeder, Lederle Laboratories, Inc., Pearl River, N. Y., secretary.

Saint Louis District Meetings. Roosevelt Hotel, St. Louis, Mo., the first Friday of February, April, June and November. W. C. Schofield, Dept. of Animal Pathology, Ralston-Purina Co., St. Louis 2, Mo., secretary.

Houston Veterinary Medical Association. Houston, Tex., the first Thursday of each month. Edward Lepon, Houston, Tex., secretary-treasurer.

STATE BOARD EXAMINATIONS

Illinois—The Veterinary Examining Committee of the Illinois Department of Registration and Education will hold examinations on July 1-3, 1947, at 160 N. LaSalle St., Chicago, Ill. Applications should be filed with Mr. Phillip M. Harman, Department of Registration and Education, Springfield, Ill. For other information also address Mr. Harman.

Louisiana—Louisiana State Board of Veterinary Medical Examiners will hold an examination on August 6, 1947, at the State Capitol, Baton Rouge, La. Address inquiries to Dr. Arthur Goodwin, secretary of the board, New Iberia, La.

Minnesota—Minnesota Veterinary Examining Board will hold an examination on July 8-9, 1947, at the State Capitol, St. Paul, Minn. Address inquiries to Dr. D. B. Palmer, executive secretary of the board, Wayzata, Minn.

New Hampshire—The New Hampshire State Board of Veterinary Examiners will hold an examination on July 2, 1947, at the State House, Concord, N. H., at 10:00 a. m. Address inquiries to Dr. H. T. Paul, secretary of the board, Portsmouth, N. H.

West Virginia—West Virginia Veterinary Board will hold an examination on August 11, 1947, 9:00 a. m., Hotel Gore, Clarksburg, W. Va. Secretary must receive applications at least ten days prior to date of examina-

tion. Applications accepted only from graduates of schools accredited by the AVMA. Address inquiries to Dr. William E. Trussell, secretary of the board, Charles Town, Jefferson County, W. Va.

BIRTHS

To Dr. (API '33) and Mrs. Lee M. Becton, 69 Madeline Ave., West Asheville, N. Car., a son, John William, Feb. 16, 1947.

To Dr. (OSU '38) and Mrs. Stanley E. Peters, 2754 Madison Ave., Baton Rouge, La., a daughter, Mignon Stephanie, Feb. 25, 1947.

To Dr. (ISC '34) and Mrs. Edward E. Thompson, Rt. 3, Salem, Va., a son, Robert Douglas, April 11, 1947.

To Dr. (MSC '40) and Mrs. Warren M. Strong, 748 S. Pickwick, Springfield, Mo., a son, Roger Michael, April 17, 1947.

To Dr. (KSC '43) and Mrs. Fred B. Ogilvie, 1110-12 Minnesota Ave., Kansas City 2, Kan., a daughter, Margaret, April 17, 1947.

To Dr. (TEX '41) and Mrs. Noah Mash, 820 Canton St., Elizabeth, N. J., a daughter, Eleanor Esther, April 21, 1947.

VETERINARY MILITARY SERVICE

Status of Officer Personnel Act of 1947

At the time of going to press, final action had not been taken by Congress on the Army promotion bill as contained in identical bills S904 and HR2536 (see the JOURNAL, May, 1947, pp. 340-341). Veterinary representatives appeared at hearings conducted by the Personnel Subcommittee of the House Armed Services Committee on May 16, 1947. Dr. W. A. Hagan, dean of New York State Veterinary College, and AVMA *president-elect*, spoke on behalf of the Association and also the Association of American Veterinary Deans. Dean R. R. Dykstra, *president* of the latter organization, was prevented at the last moment from attending, but filed a statement. Executive Secretary J. G. Hardenbergh spoke on behalf of the AVMA and a statement, pointing out the objectionable features of the proposed legislation, was filed with the subcommittee by Drs. Hagan and Hardenbergh.

Congressman (Dr.) George W. Gillie and Col. James A. McCallam, chief of the Veterinary Division, Surgeon General's Office, also discussed the bill and stressed the fact that the Army will be unable to obtain the better qualified veterinary graduates, for whom there is great demand, unless it offers an attractive entrance rank (first lieutenant) instead of the second lieutenantancy provided in the House and Senate bills.

The Senate Committee on Armed Services was expected to hold hearing on S904 during June, and representatives of the AVMA and the dean's association were scheduled to appear. Strong arguments have already been

made to members of Congress by a number of state veterinary association officers and by other members of the profession in a concerted effort to obtain the desired correction of the Army promotion bill, including the rank of brigadier general for the head of the Veterinary Corps.

Lt. Doreen M. Hatfield Commissioned in V.C.

Lt. Doreen M. Hatfield (WASH '44), daughter of Mr. and Mrs. Kenna Hatfield of Renton, Wash., is at present serving in the Veterinary Corps, Maryland Military District, Baltimore.



Lt. Doreen M. Hatfield

Lieutenant Hatfield enlisted in the WAC on Jan. 13, 1945, and received her commission as first lieutenant in the Veterinary Corps on March 4, 1947, at Baltimore. She has received the following decorations: Good Conduct Medal, American Theatre Medal, and the Victory Medal.

DEATHS

★G. R. Booth (ONT '24), 49, Oshawa, Ont., was killed in an automobile accident near Pickering, Ont., on Feb. 18, 1947. He had been a member of the AVMA since 1929. Dr. N. A. Cullen, Weston, Ont., was killed in the same accident.

Norman A. Cullen (ONT '46), Weston, Ont., was killed in an automobile accident near Pickering, Ont., on Feb. 18, 1947. Dr. G. R. Booth, Oshawa, Ont., was killed in the same accident.

I. S. A. Hadwen (MCG '02), Toronto, Ont., died Apr. 18, 1947. Born in Lancashire, Eng., he received early education abroad. Coming to Canada at the age of 14, he graduated with a D.V.Sc. from McGill University in 1902. He served the Dominion Department of Agriculture until 1908, when he did postgraduate work at Liverpool and Cambridge Universities, returning to serve as chief animal pathologist for Canada from 1917 to 1920. After three years in charge of reindeer investigations for the U.S. government in Alaska, he was profes-

sor in charge of the veterinary research laboratory at the University of Saskatchewan until 1928. He left this position to become director of the department of pathology and bacteriology, the Ontario Research Foundation, retiring ten years ago, although still retained by the Dominion government as consultant on wild life.

L. H. Hicks (USCVS '16), 58, Rocky Mount, N. Car., died Apr. 16, 1947, of coronary thrombosis. Dr. Hicks served in the Veterinary Corps as a first lieutenant during World War I, following which he entered practice at Goldsboro, N. Car. He had been in practice in Rocky Mount since 1920, served as veterinarian for the Atlantic Coast Line Railroad, and for many years was the city meat inspector for Rocky Mount. His two sons are both veterinarians.

★T. Lambrechts (MCK '01), 69, Montivideo, Minn., died May 28, 1947, of cancer of the spine. He had been in practice until his health failed last October. Dr. Lambrechts had been a member of the AVMA since 1902.

★Jesse D. Lee (SAN FRAN '11), 62, Salmon, Idaho, died May 6, 1947, of a heart attack. Following his graduation from San Francisco Veterinary College in 1911, he practised in Montana and then returned to Salmon, his birthplace, to practise. Dr. Lee had just finished a two-year term as president of the Idaho Veterinary Medical Association and had been a member of the AVMA since 1940.

George E. Leech (CVC '91), 85, St. Paul, Minn., died June 4, 1947. Dr. Leech was an honorary member of the Minnesota State Veterinary Medical Society. He had resided in Delavan, Wis., for the past few years.

W. L. Northcutt (IND '07), 72, Liberty, Texas, died on Apr. 11, 1947. Dr. Northcutt came to Texas in 1924 and, since that time, had practised in Weatherford, Breckenridge, Crystal City, and Liberty.

★John D. Paxton (COLO '12), 58, Fresno, Calif., died May 8, 1947, following a year's illness. He had been in practice for thirty-five years in Colorado and California. Dr. Paxton was admitted to the AVMA in 1936.

★George E. Riley (ISC '45), 30, Georgetown, Ky., died Apr. 6, 1947, after a brief illness. Dr. Riley was admitted to the AVMA in 1945.

★Peri F. Strait (MCK '13), Sparta, Wis., died May 9, 1947, following a brief illness. Dr. Strait had practised in Sparta since his graduation from McKillip Veterinary College in 1913 and was a loyal and active citizen in his community. He was admitted to the AVMA in 1942.

William P. Tague (IND '22), Chicago, Ill., died March 16, 1947, in Fort Lauderdale, Fla. He was buried in his native town of Syracuse, N. Y. Dr. Tague conducted the McKillip Veterinary Hospital in Chicago for many years and had succeeded, along with Drs. George and Walter McKillip, to the practice of the former McKillip Veterinary College. He raised Argyll Bull Terriers on his farm in Antioch, Ill. Dr. Tague was a stockholder and former officer of the Judy Publishing Co., Chicago, Ill.

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